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ABSTRACT

Results of a 4-month library self-evaluation program conducted by staff members at Carnegie-Mellon University Libraries are reported in this document. The study was conducted using the Academic Library Development Program (ALDP), a self-improvement strategy for libraries to evaluate and develop their performance. The study team consisting of four task groups addressed these issues: (1) services and collections, (2) management systems, (3) human resources, and (4) technology and facilities. A summary of the recommendations from each task force prefaces the report. An overview of the university and of the library, environmental analysis, assessment of library needs, and statement of university and library goals provide a framework for the study. Documented in each task force report are: scope of study, user surveys and other methods of data collection, procedures for evaluation, findings, and specific recommendations. Supporting materials contained in appendices include statistical data, surveys, interviews, organizational charts, and pertinent correspondence. (SW)

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ACADEMIC LIBRARY DEVELOPMENT PROGRAM

A self study

University Libraries
Carnegie-Mellon University
Pittsburgh, Pennsylvania
July, 1978

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ACKNOWLEDGMENTS

None of us knew when we started this study how much of our time and energy it would take. Its successful conclusion has resulted from the efforts of many people to whom we owe many thanks.

We want to thank, first and foremost, the staff of the University libraries. Members of all task forces worked long beyond their normal 37 1/2 hours a week. Those not on task forces contributed to administration and tabulation of the student survey, gave thoughtful interviews and picked up the slack that was left by task force members.

We appreciate the advisory committee's great help and interest in our study. Their reactions and thoughtful comments on our work gave us valuable direction.

Particular thanks are due to the Council on Library Resources for funding the program. Grady Morein and Duane Webster of CLR helped us to understand the operating manual. The frustrations inherent in this kind of an exercise can be overwhelming. Their efforts were appreciated -- even though we did not always agree.

We are grateful to the Director of University Libraries, Ruth R. Corrigan, who initiated our venture into ALDP. She was able to see a potential that few of us realized, and we are pleased that she did.

Our thanks also to the university and faculty officers who granted us their time for interviews. We were given much useful information.

We owe thanks to Cynthia Fabian, a work study student, who deciphered and typed endless tables.

Finally, we are deeply indebted to Emily Musa, secretary-cryptographer for ALDP, who managed our budget, organized the files and interpreted our many report drafts. She never failed us throughout the worst winter in history.

INTRODUCTION

"The Academic Library Development Program (ALDP) is a detailed self-improvement strategy for small to medium-sized libraries. It is a program of techniques, methods and processes that academic libraries may use in evaluating and developing all aspects of their performance...with primary emphasis on development through non-judgmental self-awareness."[1] It is funded by the Council on Library Resources.

Carnegie-Mellon initiated ALDP in May, 1977; it was the second library to try the program. Guidance was provided by the ALDP operating manual with consultation from P. Grady Morein, ALDP Program Director. An advisory committee was chosen from members of the university community and outside experts. (See Appendix A)

The study team was chosen by the Library Director and charged with addressing the following issues:

1. Organization and Management: the overall operation from the standpoint of current practice and for long-range planning, especially financial support and resource allocation; personnel practices including staff size and deployment; increased productivity through the application of new technology;

2. Collection development: an integrated selection policy closely correlated with institutional goals; uniform acquisition and processing procedures within the library system; the potentials and limits of cooperative acquisition and its implication for collection development;

3. Facilities: given the constraint of zero growth in available space develop strategies to cope with an expanding collection; the concept of the library as a learning resource center;

4. Services: innovative approaches to supplement traditional library service; how to assume a more active role in the educational process.

Many of us were sceptical when we started the study. Our reduced staff was finding it difficult to complete its regular work. Was it realistic to attempt a new project that promised to require "no less than three man-years just for active participants". . . . the potential user should beware of

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1. P. Grady Morein and Duane E. Webster. "The Academic Library Development Program, Operating Manual." Council on Library Resources, Inc. Washington, D.C., April, 1977. (Working Draft.)

participating in MRAP"..(predecessor to ALDP).." if internal staffing strength is inadequate or particularly tight."[2]

Time was indeed one of our greatest problems in making this study. The demands of the program were staggering: analyses of the four major areas of library operations; services and collections; library management systems; development and use of human resources and future demands for technology and facilities were to be completed in 18 weeks by novice investigators who were also expected to carry out their full-time job responsibilities. Add to this the overall personality of our staff: people accustomed to doing a thorough job of research. Leaving stones unturned became an impossible task. Consequently, for some task forces the eight-week period stretched into fourteen; the task force studying services and collections required eight months to produce the sort of report with which they would feel comfortable. With the exception of these unrealistic time constraints, the program's objectives were met. The background data was gathered by the study team over the first four months of the study, the results of which are found in Chapters 2-5.

Particularly valuable in this preliminary section was the library idea exchange. At that point, the staff actually began to coalesce. Issues were discussed openly in a problem-solving environment and the feeling grew that the staff might gain input into management decisions. This manifested itself initially in an "us vs. them" feeling by the library staff which was probably a step towards the self-awareness and assertion that the study is planned to promote. This feeling is particularly evident in the earlier reports. The more open climate brought about by the study has dispelled much of this, fortunately, and there appears to be a new climate of trust and mutual assistance in the library. As this report is being completed, many of its recommendations are already being implemented; no one can deny the sincere interest and consideration of our conclusions by library and University administration. Now when someone says, "They'll never do that", the usual rejoinder is, "Look at ALDP!".

The study attempted to keep the staff informed about its research through periodic newsletters and circulation of its reports as they were finished.

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2. Brown, Timothy A. "The Choice of MRAP as a Vehicle for Change." In "The Management Review and Analysis Program: A Symposium." Journal of Academic Librarianship v.1, No.6, p.8 (January 1976).

Comments were welcomed and for the most part incorporated into the report. Some of the goals of the Academic Library Development Program, as stated in the Manual, are "stimulation of the exchange of ideas; increased staff awareness and participation; and the creation of an environment for change." Indeed, many of us who took part in this study have experienced a quantum jump in awareness, assertiveness and desire for self-improvement. The personal rewards have been commensurate with the labor involved. They are not to be measured simply by the finished report, however; somehow we were never able to achieve the final product we'd hoped for. Thinking about what we were doing and why, has caused us to try new methods before the report was even finished. It is a tribute to the entire staff that our criticisms were usually looked upon as helpful; umbrage was not easily taken. In some ways, we have been the happy victims of the principle of uncertainty - the very act of measuring the process has changed it.

The task force reports (chapters 6-9) make up the important findings of this study. The research and documentation are lengthy, but important. There are no recommendations that are not supported by data in the text. The main issues addressed are those mentioned in the charges to the task forces. The study team based its recommendations on their findings.

THE ALDP STUDY TEAM

June M. Gallogly
Karla Pearce Goold, Chairman
Frances C. Hardie
Ruth Ann Marshall
Melva E. Raynovich
Mary Volk

STUDY TEAM RECOMMENDATIONS

The attempt was made to consider those recommendations which require additional funding separately from the others, and to assign priorities to them. They will be designated with an (*). Some, such as the program for library instruction, can be executed in a modest fashion without additional funds or staff; however there is no doubt that its potential cannot be realized without more money. The two highest priority items in the opinion of the study team are those which request a salary increase and the updating of the reference collections. It is impossible to place one ahead of the other.

Services and Collections

1. (*) A program for library instruction should be developed. There should be adequate planning and discussion of alternative programs so that the one chosen for the Carnegie-Mellon Libraries would serve its specific needs. The study team suggests that a committee from the reference departments be set up. It would determine goals, best methods to follow, a time-table for implementation and appropriate feedback procedures. A pilot program for the Engineering and Science Library for the fall of 1978 would be a useful vehicle to test traditional library instruction methods. By the fall of 1979, the committee would plan to have devised a more extensive program for use in the other libraries.

2. The faculty liaison relationship with the library should be expanded. The bibliographers and/or acquisitions librarians should meet with the faculty library representatives every year, preferably in the fall to explain ordering procedures, apprise them of what they have to spend and discuss the responsibilities of each in relation to the book collection. To further enhance the library collection usefulness, the departmental profiles that were suggested by the ALDP manual should be compiled.

3.(*) The reference collection needs to be updated. The heads of reference of the three libraries should compile lists of new editions of reference tools with prices. This would be the basis for a special grant to bring the reference collection up-to-date. Computer searches should be subsidized by the library at the discretion of the reference librarians. This would be an alternative to updating a reference tool that is not widely used. The reference librarians would determine this in consultation with the faculty library representatives.

Management

1. A Long Range Library Planning Group, a standing committee, of 7 members should be appointed by the Director from a list of submitted recommendations and volunteers. It would be the function of this group to develop formal procedures for proposal, evaluation, approval and review of plans that affect overall operations within the library.

2. Library personnel and operations policies should be compiled during the school year of 1978-79. The original copies of all memos and organization announcements concerning policy should be kept in a loose-leaf folder in the Director's office.

3. Procedural manuals should be updated on the TEXTEDITOR.

All policy and procedural manuals should be available in the director's office. Each department should have a copy of its own manual.

4. The salary budget of the library should be increased to be more equitable with other professional salaries in Pittsburgh and on this campus. A comparison of salaries should take such factors into account as number of months worked in the year, (obviously, a nine-month contract must be pro-rated against one of eleven-months) number of hours worked in the week and other real world factors.

5. A general effort should be made to improve library communications. The Director's office should be responsible and act as a clearing-house for all intra-library communications. The department heads should circulate their annual reports among the Library staff for information purposes.

All departments in the Libraries should arrange to schedule meetings of the entire department on a regular basis.

A newsletter should be instituted, to appear on a regular basis of at least six times a year.

All staff members should make a conscious effort to improve communication by conveying information formally and informally to others. It is not just downward communication that is lacking but upward and lateral as well.

Human Resources

1. A structured orientation program for new employees should be implemented. It would be administered by a committee from all three libraries. The program should be offered at least every six months.

2. In-library training to upgrade skills should be available. These could be "mini-courses" covering one specific area of service at a time. The first might be given by the reference librarian to explain some of the intricacies of the card catalog.

3. Brainstorming sessions should be scheduled for the entire staff at least once a year.

4. A reciprocal agreement should be sought with the University of Pittsburgh and other colleges and universities in Pittsburgh so the library staff members might take courses to enhance their skills.

5. A workshop for library staff employees in the Pittsburgh area should be offered at Carnegie-Mellon. It would generate revenue for the Carnegie-Mellon University libraries and perform a needed service for the community.

6.(*) The music librarian should be scheduled full-time in the music library. A half-time clerical assistant should be hired for the Mellon Institute Library. An Associate Librarian should be appointed to assist the Director. This can be accomplished with a re-deployment of present staff, or by hiring a part-time person.

Technology

1. The quest for joint storage facilities with other libraries should be pursued. As money grows scarcer and collections larger, problems of ownership will have to be solved.

2. Janitorial service should be structured so that preventative maintenance takes the place of the expensive repairs that the library now faces. Each department should have access to a small tool kit to make necessary repairs.

3.(*) Back issues of journals should be converted to microfilm to alleviate the space problem at Engineering and Science. This conversion should be accompanied by sufficient easy-to-operate microfilm reader-printers.

4. The audio-visual services Center should compile a media holdings list for the entire campus. This would eliminate duplication of purchases and ensure compatibility of different types of media.

5. The slide collection in Hunt Library should be publicized so that it would be used by the entire campus community.

6.(*) At least one additional OCLC terminal should be leased to facilitate conversion of the shelf list to machine readable form.

CARNEGIE-MELLON

CARNEGIE TECHNICAL SCHOOLS AND CARNEGIE INSTITUTE OF TECHNOLOGY

In a letter dated November 15, 1900 to the mayor of Pittsburgh, Andrew Carnegie planned and endowed a technical institute for the youth of the city. He stated that he knew of "no better foundation from which to ascend than manual labor in youth,"[1] citing as evidence such diverse figures as William Shakespeare and U. S. Grant. The purpose of the day school was to provide more specialized training, through courses directly related to the needs of Pittsburgh industries, than was available in the public schools. The evening school for working adults was designed to help them advance in their trade. The Carnegie Technical Schools, as Carnegie-Mellon University was originally called, offered a three-year course of study leading to a diploma, not a degree. There were four units: the School of Science and Technology, the School of Fine and Applied Arts, the School for Apprentices and Journeymen and Margaret Morrison Carnegie School for Women. The latter two, in particular, offered an education of a strictly vocational nature. The annual tuition for day students was $20; evening students paid $5. The first director was Arthur Anton Hamerschlag, chosen for his expertise in the field of industrial education. The actual administration of the school was in the hands of the trustees of the Carnegie Institute of Pittsburgh, founded just ten years previously, which consisted of a library, an art gallery and a museum. The first class entered Carnegie Technical Schools in 1905, and graduated in 1908.

It soon became apparent that a three-year diploma was not sufficient in the competition of the job market. In 1912 the institution was incorporated in Pennsylvania under the new name of Carnegie Institute of Technology. It was able to grant bachelor, master, doctoral and professional degrees in pure and applied science and the arts.

The College of Applied Industries (originally the School of Apprentices and Journeymen) occupied an anomalous position in the new organization as it still granted a diploma, not a degree. Since its students could neither belong to fraternities nor play in inter-collegiate athletics, they were often second-class citizens on campus. The public and employers tended to group all Carnegie Technical graduates together, not understanding the structure of the institution. This problem was eliminated in 1922 when the College of Applied Industries was

raised to collegiate status, with its students and the students in the College of Engineering sharing a common freshman year. Some night school classes of a totally vocational nature remained, but all the day students were now bona-fide collegians. The idea of a person working during the day and earning a degree through evening study died hard at Carnegie Tech; until 1935 there were still more night than day students. The evening division was officially closed in 1973, primarily because it was unable to compete with the University of Pittsburgh's state subsidized tuition, approximately half that of Tech's.

An important tradition was started at Carnegie Tech in 1919 when the Division of General Studies was added: liberal arts courses were now required for graduation. A study made in that same year found Tech was second in the amount of time spent by its students on non-professional subjects among comparable schools of engineering, e.g. Penn, Cornell, Purdue.[2] Under President Baker, 1923-1935, (the title of "president" had been granted in 1918) the required number of English courses was increased so that by 1933, 24 of the 144 credits required for engineering graduates had to be in liberal arts; for the arts students from 23% to 35% of the classes had to be in general studies. President Doherty, 1936-1950, instituted the Carnegie Plan for Professional Education, which became a national model for liberalized technical education.

> "We are in position to guide the students to a sound scientific foundation; to discipline them to scientific habits of thought in dealing with engineering material and problems; and to engender the ability and desire to extend both after graduation. They will not be engineers when they graduate, but they will be prepared to become engineers very rapidly. With a sound, unified, and active scientific knowledge, and with thinking powers disciplined and tuned to effective action, they will be broadly adaptable."[3]

Liberal arts were always considered peripheral, however, and the first liberal arts major was not offered until 1942, an option for women only in Margaret Morrison Carnegie College. In 1965, the first advanced degrees in English and history were granted.

The Carnegie Library School was added in 1930 and graduated its last class in 1962 after which it became part of the University of Pittsburgh.

Carnegie-Mellon University

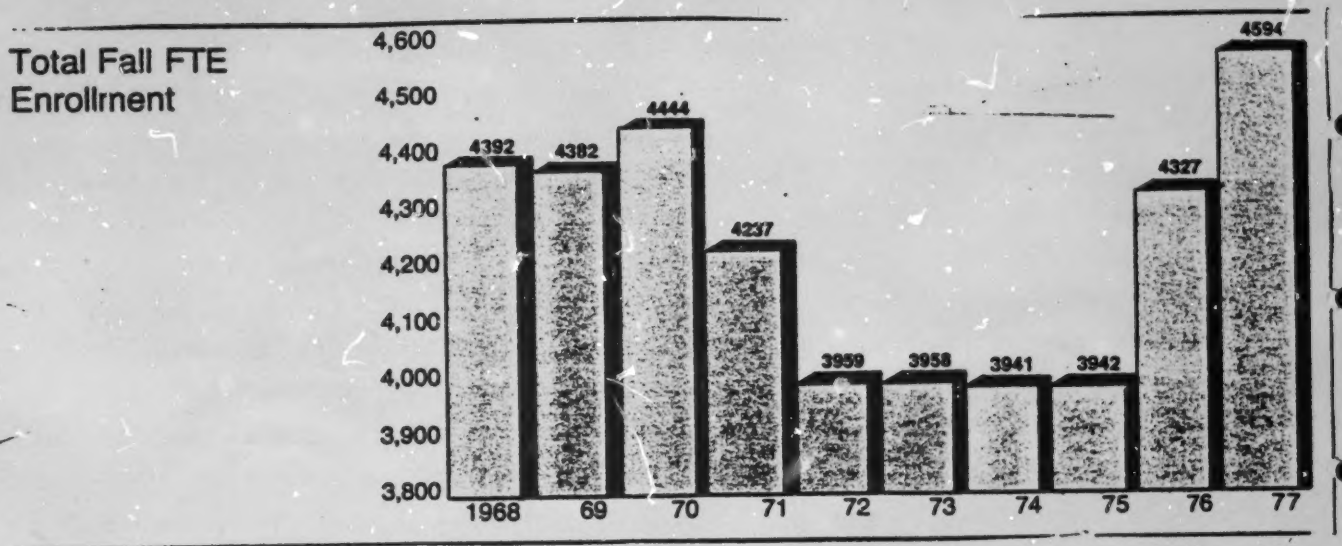
In the fertile climate of the '60's when universities were being born

weekly, Carnegie followed the trend. To its Graduate School of Public Administration, which had been founded in 1949, it added the School of Urban and Public Affairs in 1968, expanded its program in Humanities and Social Sciences to a full-fledged college in 1967, and in the same year merged with the Mellon Institute to become Carnegie-Mellon University.

The Mellon Institute was founded in 1913, from a plan conceived by Dr. Robert Kennedy Duncan to make the results of scientific research, through industrial exploitation, apply more effectively to human needs. His work, which he began at the University of Kansas in 1910, caught the attention of Andrew W. and Richard B. Mellon, who brought him and his research procedure to the University of Pittsburgh. It remained a part of the University of Pittsburgh until 1927 when it was incorporated separately, although it retained a special relationship with Pitt for many years thereafter. Since the merger with Carnegie Institute of Technology, the graduate departments of Chemistry and of Biological Sciences of Carnegie-Mellon University have been housed in the Mellon Institute building. They operate as part of the academic department of the pure sciences known as Mellon Institute of Science of Carnegie-Mellon University. In 1975 the sponsored research division was renamed Carnegie-Mellon Institute of Research, and Dr. Theodore S. Hermann became its president. Since 1975 the mission of CMIR has been expanded to include the solving of goal-oriented problems very similar to the original goals of the Institute. Programs in management, engineering, physical, health and forecasting sciences are being undertaken jointly with industrial firms, governmental agencies and foreign governments.

The '70's bring more changes for Carnegie-Mellon University, chiefly skyrocketing costs and greater competition for fewer students, with a consequent contraction in expectations for growth. As President Richard M. Cyert, 1972-, states in the Annual Report of the President for the Academic Year 1975-76,

> "Many questions arise as how universities that are contracting can maintain excellence, stimulate high motivation in the participants, develop innovative programs, achieve fiscal equilibrium and continue the viability of the organization...The technique is to find ways of achieving approximately the same quality level of education and research that has been achieved but to achieve it with fewer resources."[4]



Carnegie-Mellon University is currently divided into the following colleges; the Carnegie Institute of Technology, the College of Fine Arts, the College of Humanities and Social Sciences, the Graduate School of Industrial Administration, the Mellon Institute of Science and the School of Urban and Public Affairs.

In 1976 there were 4,366 full-time equivalent students including 1,052 graduate students. The faculty numbers 422, of whom 56% are tenured. In the period since the formation of Carnegie-Mellon University (June 1967 through May 1976) it has conferred approximately 6,820 Bachelors, 3,243 Masters, and 1,140 Ph.D. degrees. In 1976 assets totaled about $215,940,810 and the expenditures were $48,476,410. The library budget for 1976-77 was $718,026.

University Libraries

Carnegie Technical Schools started with the same administration as the Carnegie Institute, and it was assumed that the Carnegie Library of Pittsburgh, which was also part of the Institute and boasted an excellent collection in science and technology, would be sufficient to serve the Tech students. It was generally felt that courses of study in vocational schools did not require many library assignments. Consequently, departmental libraries, with a few reference sources basic to their particular disciplines, became the rule on campus. Librarians at CIT reported to the librarian at Carnegie Institute.

In 1920 Blanche Wappat, previously Librarian at the School of Applied Design, became the first official librarian of Carnegie Institute of Technology. The library was housed in a former World War I soldiers' canteen called the "Hut," a "temporary" building that was used for the next 23 years. According to the 1925-26

annual report of the librarian, "the 'Hut' is usually so warm on midsummer afternoons that study is very difficult. Books were, therefore, loaned at 12:25 for overnight use, and the reading room closed."[5] A member of the staff did remain, however, perhaps indicating that the library staff were expected to be hardy in those days (at least hardier than their patrons.) A sidelight which points up CIT's laboratory orientation is that uncollected fines and lost books were reported as "library breakage".[6] In 1943 the library moved to the second floor of Baker Hall, and then to larger quarters on the third floor in 1946 when it merged with the Social Relations Branch to almost double its collection at 78,000 volumes. With the help of several outside grants the library built up its collection in the late 40's, rapidly using up all available space by 1947.

In August of 1947 Melvin J. Voigt became head librarian and the library acquired a new stature on campus. He was the first librarian to report directly to the president and to meet regularly with him and the deans to discuss academic issues. Under Mr. Voight's leadership the collection grew significantly, the professional staff began to participate more actively in academic activities and to seek cooperation with other Pittsburgh libraries.

Serious gaps in the collection still existed and continued to be filled by extra-budgetary sources and loans from the Carnegie Library of Pittsburgh. In 1953 the Middle States Accreditation Report stated that the collection was minimally adequate, the library instruction course was "one of the best", but the salaries were very low, particularly those of the support staff.[7]

Special funds were raised to improve both the undergraduate and research collections. A $10,000 grant from the Pittsburgh Foundation's Wherrett Memorial Fund, for example, was used for the improvement of the collection in engineering and science.

Kenneth H. Fagerhaugh served as Director of Carnegie-Mellon University Libraries from August 1952 through January 1974. He reported directly to the President until 1964 when the administration was reorganized and all the deans and the librarians began to report to the Vice President for Academic Affairs. Mr. Fagerhaugh planned the building of the Hunt Library and the Engineering and Science Library in Science Hall. Under his directorship the collections continued to grow including the establishment of the Fine and Rare Book Rooms. He continued the library's involvement in library cooperation and was an active participant in the founding of the Pittsburgh Regional Library Center.

In 1961 the library moved into a new building for which $2.8 million was donated by Mr. and Mrs. Roy A. Hunt. It had three floors, an unfinished fourth floor and a penthouse for the independently endowed Hunt Botanical Library (now the Hunt Institute for Botanical Documentation.)(*) The fourth floor, finished in 1964, houses the Fine Arts collection, the Music collection, the Slide Room and the Fine and Rare Book Room. Even with the new library building, space rapidly became a problem. The Hunt Institute is occupying space on the third floor in addition to a large part of the basement for a workshop. The audio-visual collection was moved to the basement of Hunt Library in 1976 using space originally devoted to stacks.

In 1971 the Engineering and Science Library was moved from the Hunt Library building to its present location in Science Hall. The reason for its new location was the need for additional space for both the Engineering and Science and the Hunt Institute libraries. Originally the Engineering and Science Library space in Science Hall had been planned for a branch of Engineering and Science to be used as a research library for graduate students and faculty. But the cost of duplicate collections and facilities and the expansion of Hunt Botanical caused a change of plans, and the entire Engineering and Science Division was moved.

With the merger of Carnegie Tech and Mellon Institute, the Mellon Institute Library became part of the Carnegie-Mellon University Libraries. It had started in 1913 with the Institute and grew along with it. Its collection was developed to meet the needs of research in progress at Mellon. As research was undertaken new subject areas were entered: industrial health, environmental sciences, metallurgy, metal physics, pharmaceutical research, biological sciences, etc.

Library Today

Administration

The Carnegie-Mellon University Libraries have been recently relocated in the administrative structure of the university. Formerly the library director reported directly to the Vice President, Academic Affairs. Since 1975 the libraries have been part of the Division of Information Services which also includes the Computation Center. The library Director reports to the Vice Provost of Information Services who, in turn, reports to the Vice President for Business Affairs. The Director, since September 1, 1974, has been Ruth R. Corrigan. As Director of the University Libraries she meets monthly, in committee, with the other heads of departments within the Division of Business Affairs. She is also a member of the University

(*) In 1977 that endowment was discontinued, and the Hunt Institute receives its maintenance as part of the university budget.

Library Committee, a group which meets monthly to discuss library policy. Librarians serve in the Faculty Senate and are ex-officio members of the College Councils. The administration is hierarchical with decisions coming from the director through the five department heads (heads of reference and circulation, technical processes, fine arts, Engineering and Science, and Mellon Institute.) There are meetings of the department heads and professional staff monthly.

Staff

As of November, 1977, there are 37 full-time equivalent members of the University Libraries staff; 13 are professional librarians. In 1940 the Executive Committee of the General Faculty approved a recommendation giving librarians full faculty privileges without specific academic rank. Because of the recent organizational changes mentioned above, the question of status and rank still needs to be clarified. According to the Middle States Evaluation of 1976, the staff is one of the Library's strong points. "Both the professional and non-professional members have a keen sense of pride and professionalism. The team was impressed with their attitude of service towards users, particularly toward students. The leadership of the library had remained professional, sensible, highly motivated and thoroughly loyal to the faculty and students which the library must serve."[9] They also noted that the staff is too limited..."There are not enough people on the grounds to do the job that Carnegie-Mellon needs to have done."[10]

Collection

In 1975-76, the libraries held 510,822 volumes, about 20,000 having been added in each of the previous three years. Books, for the most part, are selected by the faculty, with each department being allocated a certain amount of the library budget to spend. Hunt Library is given a small amount to spend on the general collection. In 1975-76 Hunt Library materials budget was $168,000 of which $41,000 was for books other than standing orders. The Mellon Institute Library book budget was sufficient only for standing orders and journal subscriptions. Other special funds in Hunt Library, such as the Mellon fund, are grants from outside organizations to build up parts of the collection. Each library takes responsibility for different subjects: Mellon Institute Library is responsible for chemistry and biology; Engineering and Science for the other sciences including behavioral psychology, and for engineering; and Hunt for the humanities and social sciences including economics, government,

cognitive psychology, and the fine arts.

As part of a university-wide economy drive, journal subscriptions have been cut in the last four years at Hunt and E & S from 2,998 in June, 1973 to 2,269 in June of 1976. The Mellon Institute Library's total of 396 in 1976 represents an even more drastic cut from 586 in 1973. Almost all duplicate subscriptions have been eliminated.

The Fine and Rare Book Room of Hunt Library contains 3644 fine books and 3405 rare books, including illuminated manuscripts, incunabula, fine press books, first editions of English and American literature and special collections of selected 20th Century authors.

The growing government documents collection numbered over 85,000 in June 1976, and the documents librarian estimates that it is consulted for half of Hunt Library's reference questions.

The Tech Room contains the University Archives, a depository of materials of historical significance to Carnegie-Mellon University. Among its most used items are the drama prompt books, submitted for the degree of Master of Arts, which are play production manuals covering every aspect of proposed drama production from costume and set design to acting instructions. The papers of Walter Van Dyke Bingham, a pioneer in industrial psychology and educational testing, who taught at Carnegie-Mellon from 1915 to 1924 are also deposited here.

During the summer of 1976, Teaching Aids moved from Baker Hall into its new location in the basement of Hunt Library and changed its name to Audio-Visual Services. The move resulted in closer ties with general library services and materials and in expanded facilities.

In 1977 a Computer Science Browsing Room was opened in the Engineering and Science Library. It contains new books on computers and their applications in all fields and is served by its own librarian.

Hunt and Engineering and Science Libraries are each open 100 hours per week. During exam periods, hours are extended to 112 hours a week for a 2-week period. Mellon is open 45 hours a week, but has 24-hour controlled access. Since the departments ran their own libraries long before a centralized library was built, and Mellon Institute Library had well-established procedures for over 50 years before the merger, there is not the unanimity of procedures that one might expect. For example, Mellon Institute does its own acquisitions and cataloging, using the Library of Congress classification; Hunt and Engineering and Science are served by a central Technical Processing Department in Hunt Library, which

classifies according to the Dewey Decimal System.

The Library has attempted to reduce the inconvenience suffered by chemical and chemical engineering faculty when duplicate journals in their fields were cancelled at the Mellon Institute and Engineering and Science Libraries by providing duplicates of the tables of contents to the library whose subscription was cancelled; i.e. Mellon Institute Library sends copies from the chemistry titles and Engineering and Science Library is responsible for those in chemical engineering. Faculty members may borrow the journal through the campus mail or order articles free of charge from the library holding the subscription. This practice was curtailed in 1978 when the new copyright law went into effect.

In 1974 Carnegie-Mellon University joined the Ohio College Library Center (OCLC), a cooperative cataloging network. Library of Congress MARC tapes are supplemented by cataloging information from member libraries which is entered into a centralized computer. Succeeding libraries can call up the information on their terminals, change it to suit themselves and order individualized cards. The computer lists on-line all libraries who have processed the book. Consequently it is also useful for interlibrary loans.

The Pittsburgh Regional Library Center is a consortium of public, academic and special libraries in the area. Carnegie-Mellon was a charter member and continues to be very actively involved in the group. Ruth Corrigan, Director of University Libraries, served as president in 1976-77. PRLC's projects, such as the Union list of Serials, published in 1973, have greatly enhanced reference service in its member libraries.

In 1975 Carnegie-Mellon began to use the Lockheed Information Retrieval Service, an on-line system that searches over 60 computerized data bases in a wide range of subjects. In 1977 the Systems Development Corporation services were acquired as well. The fact that the costs of the service are borne by the user has definitely limited the service's use, but its obvious advantages over manual searching have made the service more and more popular. In the first nine-month period of its use, September 1975 to May 1976, 39 searches were done. From that June to the following May there were 85 searches. The libraries hope to expand this logical extension of their traditional reference service.

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[4]Richard M. Cyert, Annual Report of the President for the Academic Year, 1975-76 (Pittsburgh: Carnegie Mellon University, November 30, 1976,) p. 3.

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ENVIRONMENTAL ANALYSIS

Purpose

The purpose of the Environmental Analysis is to foresee the important trends occurring within librari nship, higher education and society that would be likely to affect the library. The library can have no control over such things as declining birth rates and increased costs of materials. Nevertheless, it must explore these issues in order to develop responsive, effective measures to deal with them.

Strategy

The Study Team identified the major changes affecting the library and the University. Then it studied what was being done to cope with these changes and suggested possible solutions.

The strategy for conducting the Environmental Analysis included reading, interviewing and discussions among study team members. Each member concentrated her study in one major area. For instance, one person studied how economic changes would affect the library; another studied how the rapid expansion of technology could be used to modernize library operations.

The bibliography in the ALDP Manual was used as the basic source for readings. This was up-dated and supplemented by a computer search on the ERIC database and a search of the more recent volumes of Library Literature and the Education Index. Articles of interest were photo-copied and passed around to members of the Study Team. The reports from the faculty library planning committees of 1968 and 1973, and the university and library annual reports, were consulted.

Various people were interviewed to discover what forecasts they were making and what conditions they thought the university and/or library would be facing in the future. Each interview was conducted by two or three study team members.

People Interviewed

Herbert A. Simon, University Professor
Ruth R. Corrigan, Director of University Libraries
Thomas M. Kerr, Head, AMS, Graduate School of Industrial Administration
Frederick Rogers, Director, Planning and Information Systems

Richard L. Van Horn, Vice President for Business Affairs

Thomas Galvin, Dean, Graduate School of Library & Information Sciences, University of Pittsburgh

William F. Elliot, Vice Provost, Enrollment Planning

Leland Hazard, Professor Emeritus and Lecturer on Industrial Administration and Law

David Miller, Professor of History

Chairman, Faculty Library Committee, 1973

Chairman, University Library Advisory Committee, 1977

Reports of interviews and written reports on the reading were submitted and discussed at the regular Study Team meetings. The general outline in the ALDP Manual served as a basis for organizing discussions.

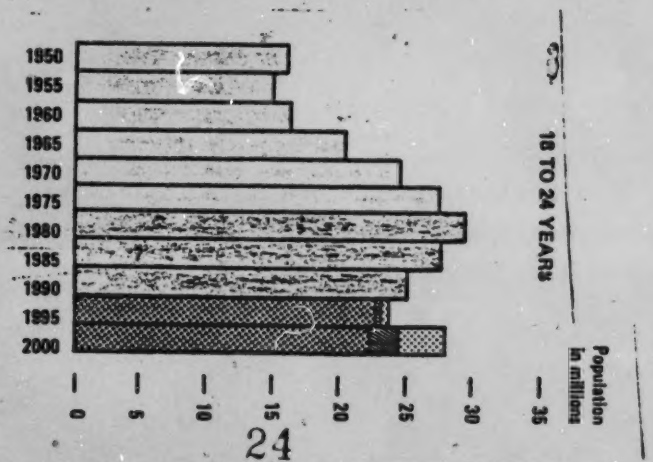
This Environmental Analysis is divided into two parts. The first part deals with major societal trends and how higher education and academic librarians will react to them. The second part will show how Carnegie-Mellon University and its libraries are coping with the same changes.

1. Economic Changes

A 10-year projection assumes an inflationary rate of 6-7%. Periodicals rose over 12% in 1975 while book costs in that year escalated an even greater 15%.[1]

The 1977 dollar's devaluation in relation to the German mark and Dutch guilder has made the price of many foreign periodicals even more expensive.

Declining student population reduces total tuition income. The post-sputnik college boom of the 60's was based in part on the huge increase in college-age population. The number of 18 to 21-year-olds went from 9,214,000 in 1960 to 16,330,000 in 1975. The size of the 18 to 21-year-old group will actually contract between 1977 and 1990 from a peak of 17,970,000 to 14,506,000. Moreover, the percentage of high school graduates attending college increased 7% between 1964 and 1974 but, according to HEW, will increase by only 2% between 1974 and 1984.[2]



Total student population is projected to increase slowly from 9,023,000 in 1974 to 9,911,000 in 1984. However enrollment in private institutions will probably decline 7% while enrollment in public institutions increases 14%. Four-year college and university enrollment will be down 2%, while two-year institutions will be up 31%. These projections show that Carnegie-Mellon as a private, four-year university, will have to counter these trends to maintain a constant enrollment.[3]

Since colleges and universities will not be expanding rapidly, new faculty will be hired only as older faculty members leave. This is becoming a problem as the aging tenured faculty stay until retirement, freeing fewer places at the lower ranges. At this writing, there is a strong possibility that compulsory retirement will become illegal, which would, of course, exacerbate the problem.

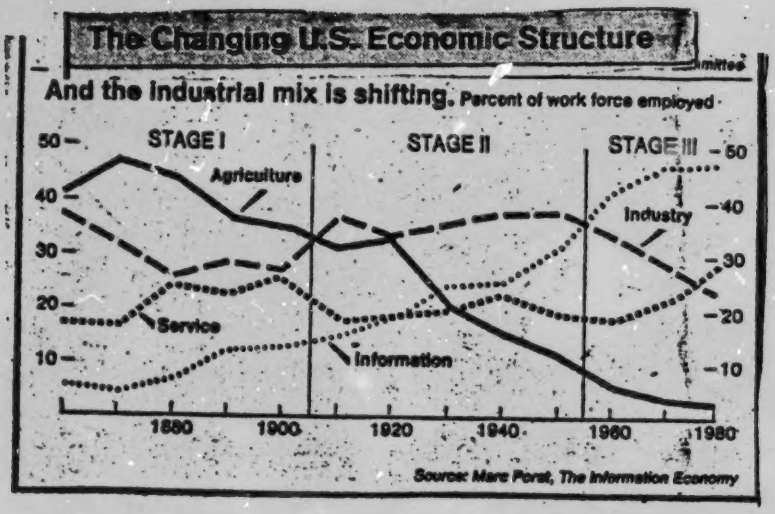
The federal government has cut back on its student aid. Federal student aid as a percentage of cost of instruction covered by tuition decreased from 69% in 1971 to 53% in 1974. As tuition goes up and student aid goes more to those in lower income brackets, it becomes more and more difficult for middle class students to afford the cost of a private college.

2. Social Changes

Since World-War II a post-industrial society has emerged. Between 1900 and 1945 industrial growth in the United States was based on inventions made before 1900. Cars, steel, and appliances are all now mature industries. They will grow slowly, if at all. The real growth industries will be based on science. The first "knowledge industry" was the chemical industry in which molecules are manipulated according to chemical principles that form countless different products. Other examples include the computer industry based on theoretical mathematics, and the nuclear power industry based on nuclear physics.

Workers in the "old industries" learned how to do their jobs through an apprenticeship. Now the professional and vocational schools will be the preferred avenue toward jobs. Computer programmers and computer scientists of whom there are now 2.5 million, are trained in schools, not on the job. More than half the wages and nearly half the 1.8 trillion dollar gross national product "originate with producing, processing and distributing information goods and services."[4]

The American labor force grew by 1.4% per year from 1940-1970, but the annual growth rate of information workers was 3.5%.[5]



Colleges and universities will have to produce graduates suited to enter the knowledge society. Some highly educated pure scientists and a large number of technologists will be needed. Engineering colleges should produce managers of industrial companies who will have a sufficient understanding of science to foresee its technological implications.

Information Explosion

Libraries have been squeezed both by the university retrenchment demanded by the end of the student boom and by the high rate of inflation for materials. To add to their problems, there has been a tremendous increase in the number of magazines and books published. According to Arthur M. McAnally the "knowledge produced by the world up to 1900 was doubled by 1950 and doubled again by 1965."[6]

Librarians must find new methods to perform their traditional role of organizing and providing access to the widest range of information on a subject. Bibliographic search by computer cuts hours from the time spent on manual searching and it is certainly more cost-effective.

Since libraries cannot afford to purchase or store more than a small portion of needed materials, alternatives to purchase are being explored. Whether or not a library owns a book would not concern a user, so long as he had rapid access to it. Access is rarely so rapid or convenient, however, when another institution owns the book. The patron must suffer the inconvenience of travelling to another facility himself or waiting for the material to be delivered. Less than rapid access can be by interlibrary loan. Computerized systems, such as The Ohio College Library Center facility, provide up-to-date information on the location of materials. Libraries possessing an item are listed in the database. Completion of an ILL can take from two days to a month, with some requests taking as long as six months.

There are current research projects investigating the feasibility of systems that would deliver documents directly to the user through a computer network. Dr. Russell B. Ackoff, of the Wharton School, University of Pennsylvania, has designed a National Science Communication and Technology System (SCATT). Other ideas have been put forward, such as audio tape recordings and laser recording; the technology is available. In all of the schemes the copyright problem has to be addressed.

Some libraries are fighting escalating costs by charging for services that were formerly gratis. Typically, computer search charges are passed on to the client, whereas manual bibliographic searches are considered part of the regular service, and involve no extra charge.

Access can also be provided by a cooperative storage center either on a local or a national level. The Center for Research Libraries has a collection available to member libraries who pay a fee based on the size of their collection. It is a library's library with no service to individuals. On the local level, the Pittsburgh Regional Library Center is investigating the possibility of a central storage area at the present time. Hard proprietary decisions must be faced in this sort of situation where ultimate ownership of material remains a considerable stumbling block. Libraries in the area might reasonably curtail their purchase of rarely used items if they could be assured of getting them quickly from a centralized storage facility.

In the planning report, issued in 1974 by the faculty library advisory committee, a courier service was recommended. It would operate among the libraries of Carnegie-Mellon, Pitt and Carnegie Public, delivering books or photocopies within an hour.[7] This recommendation has not yet been implemented.

Use of microforms would help with problem of limited storage space and would also cut down on costs of binding periodicals. More and more serials and monographs are available on microforms. Reader resistance to this medium may be overcome by the improvement of readers and printers.

Technological Environment

The capability of performing record-keeping tasks in an information center, using a computer based system, has existed for some time. For the small or medium-sized library, however, the cost has been prohibitive. Only those libraries whose parent organizations have had computer facilities have been able to take advantage of recent developments. For this reason much of the pioneer work in the use of machine systems has been carried out in industrial and research libraries.

Today the costs of computer systems are being reduced, networks and other cost/resource sharing ventures are functioning, mini-computers are becoming available and a pool of professional information scientists exists. Automated library functions will soon be within the reach of even small libraries.

Book production by computer may be an important factor in stabilizing the cost of printed material. The latest edition of the American Heritage Dictionary was collated and alphabetized by computer, and computer-produced indexing is becoming commonplace.

The real need now is in the systems and design area. The creation of pre-packaged programs, adaptable to any library, for automating circulation, shelf-list, serials and acquisitions records is the next step. The high cost of programming would be eliminated and compatible systems among libraries would encourage networking. The use of commercially generated information retrieval systems has already become general.

New trends in education, such as self-paced learning programs, require a heavy investment in audio-visual equipment. Not only does the library need a well-supplied learning center, it must also develop an adequate collection of instructional films, slides, tapes, records and a whole miscellany of electronic communications devices.

It is a delusion to assume that the introduction of automated systems will reduce the need for staff. In fact, such systems require highly trained specialists if they are to be made to operate efficiently. In all likelihood the ratio of librarians/information specialists to clerical assistants will increase. When the cost of automating library systems is calculated this must be taken into account.

Changes in Higher Education

Colleges and universities are trying to keep abreast of the changes described above. Private institutions in particular must strive to maintain excellence because they are competing with the less expensive public universities.

Interdisciplinary studies enable students to combine fields so they can study exactly what they want to learn. For example, a student interested in Far Eastern studies will take courses in the political science, language, art and history departments. A number of engineering schools have begun to implement the concept of a "liberal engineering education" by offering interdisciplinary courses and seminars to engineering and other students.

Centralized libraries serve interdisciplinary groups more effectively. Branch libraries, based on the traditional division of studies, cause confusion and inconvenience. Environmental studies, for example, encompasses engineering, pure science and political science. Some books on the subject defy catalogers to place them where they'll be most useful.

Many students are interested in a more career-oriented education than in the past. There is not much demand for a generalist; in a contracting economy marketable skills are at a premium.

There was a 50% decline nationally in undergraduate liberal arts majors between 1971 and 1976. "Liberal art majors experience relatively greater difficulties in obtaining adequate employment upon graduation."[8]

Educational programs that link learning and experience are growing. By applying knowledge learned in school to a work problem, students can see the importance of learning. Work-study programs long utilized at places like Antioch are being tried at many colleges.

Learning and experience can also be combined at a later stage in a career. Higher education is becoming interested in the older students; women with older children, executives who need new skills or engineers whose knowledge becomes quickly obsolete are all candidates for more training. The Rev. Frederick R. Clark, Vice President for Finance at Duquesne University, said, "In the future colleges are going to appeal to older people in outreach programs. In the next five years it's going to change drastically.[9]

Carnegie-Mellon University and University Libraries' Response to Environmental Change

Economic

Carnegie-Mellon has fought rising costs by curbing unnecessary spending. President Cyert cut the university staff to 1564 in 1976 from 2,152 in 1970. Tuition raises and increased research income has enabled the university to balance its budget for the last four years, which is no mean feat considering that the university's budget was $1,491,000 in the red in 1972.

Library staff has decreased from 51 in 1972 to 41 in 1977. The reference departments in Hunt and Engineering and Science libraries reduced hours of professional service, even though circulation is increasing. There is no

professional librarian on duty after five on weekdays or all day on Saturday.

Library materials budget was also strictly curtailed. The book budget increased from $96,000 in 1971 to $107,000 in 1976, an average of just over 2% per year. Total periodical subscriptions were cut from 3,584 in 1973 to 2,665 in 1976. In order to determine which periodicals to cut, a study of periodical use was initiated in 1975 in the Engineering and Science Library. The data were analyzed by the library to assist the library representatives in decisions regarding the cancellation of journals and as one of the criteria in future microfilm decisions. A space study was also undertaken at Engineering and Science, which is included in Appendixes III and IV.

In 1976-77, a special grant of $100,000 was given to the library of which $27,500 has been added to the departmental accounts for 1977-78.

Carnegie-Mellon University continues to attract enough applications of a sufficiently high caliber to maintain their position educationally as well as economically. In 1976 4930 students applied, 2646 were accepted and 1138 of them did enroll at Carnegie-Mellon University. The administration is hopeful that a stable enrollment can be maintained through the 80's. In his address to the faculty in September 1977, President Cyert stated that "Our long-run financial viability is still going to be dependent to a significant extent on our ability to attract undergraduates." Now 70% of the students are from the Pennsylvania, West Virginia and Ohio area. The Planning Office is searching beyond this region for qualified students as well as seeking an increase in minority applications. Only 15% of the current engineering classes are women, although there is an excellent job market for women engineers. Dr. Van Horn thinks that in the future this could be 50% if women are encouraged to apply.

To attract more students, Carnegie-Mellon University plans to maintain and build strengths in selected areas. The President wants no expansion into new fields in undergraduate education or graduate research except at interfaces of two existing fields. Carnegie-Mellon University is too small to maintain leadership in all fields but it can remain outstanding in some. Planners in each college have been told to ask themselves "In what specific areas in the field represented by the department does Carnegie-Mellon have a comparative advantage?"

The Carnegie-Mellon University career-oriented education fits well into the needs of the post-industrial society. In the knowledge society workers learn

their jobs in school not on the job. One of the stated goals of the university is "to provide a professional education which in the case of H & SS is modified to read liberal professional education." The department of H & SS offers "professional" concentration in technical translation, applied social statistics and public affairs. Professional skills in teaching are stressed by the Doctor of Arts program. Career programs are available for science majors who do not want to pursue a Ph.D. Students can get a job immediately after graduation with a B.S. in computational Physics or Chemical Instrumentation, for example.

Life-long learning used to be a major part of the Carnegie Institute of Technology. The night school provided an arena for upgrading skills while holding a job. Since the demise of the night school in 1973, Carnegie-Mellon University has still been much less involved in continuing education. As stated in the Carnegie-Mellon Organizational Announcement No. 293 dated October 25, 1977, "All education activities, including all continuing education and special education courses, should meet the standards established for introductory offerings in the University...Carnegie-Mellon will not offer courses at a low level or of a mechanical nature. These kinds of courses are better offered by community colleges and other public institutions."

How Carnegie-Mellon Libraries Deal with Change

Several formal mechanisms exist for informing the library and the rest of the academic community of new developments in the university. Organizational memos from top administration are the official announcements of new programs, policies and personnel. There is a weekly meeting of the Library Director with her immediate superior, the Vice Provost for Information Services, during which events in the library and the university are discussed. Two librarians serve on the faculty senate, in which they participate in some university governance. In the Business Affairs budgeting sessions, in which the director participates, new programs are discussed and funded. The Director also receives the minutes of the college councils. Library representatives from each department inform librarians of new developments on an informal basis. Other informal mechanisms tend to be in the verbal mode: conversations over lunch, questions at the reference desk.

Consideration is often not given to library needs when new programs are introduced. Usually there is no special funding to provide a core collection in

a new field. A recent example of this was in the Biological Sciences Department. A faculty member was hired to teach Developmental Biology, for which there was literally no material in the library. At the direction of the department head, a list of books was purchased for the library. Because there was no special funding, this money had to be taken from the Biological Sciences Department Teaching Fund.

The reserve section represents the library's most immediate response to faculty and student course needs. Every effort is made to serve the convenience of the students and faculty without too much disruption of the collection. To augment the library collection, many professors have added personal copies to the collection for the duration of a course.

The university library committee was re-activated in the summer of 1977 to deal with some specific issues, the most pressing of which was the conversion to microfilm of some of the journals in the Engineering and Science library. The director and the Engineering and Science librarians are the only regular committee members from the library, however, and the minutes from these meetings are not circulated. With their many obligations, it is sometimes difficult for them to keep the library staff as well informed as they'd like about the workings of this committee.

The only library staff member with any specific responsibility for identifying or analysing trends is the Director. Participation of the library staff in planning is on an ad hoc basis. Responses to trends tend to be passed down through the university hierarchy. The library staff is informed rather than consulted.

In its charges to the task forces, the study team will recommend that mechanisms be set up to involve the library staff to a greater degree in planning new programs, and that they be allowed to exercise more discretion in their response to these programs.

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ASSESSMENT OF LIBRARY NEEDS

According to the Academic Library Development Program manual, library needs should be assessed both from the viewpoint of the library users and the library staff. It was decided to delay the survey of library users until the fall, since to do it at the beginning of June would reflect the preference of the summer school population, who would probably not have had sufficient time to make an adequate judgment of Carnegie-Mellon University's library service.

Idea Exchange

Brainstorming sessions were set up to ascertain what issues the library staff felt were most important. The staff was divided into four groups who met in the morning or afternoon on two consecutive days. The composition of the groups was random, except that no one was in the same group with someone who was his immediate superior. The sessions were conducted by two members of the team who recorded each suggestion made. They attempted to lead the group only insofar as they restated points to make sure everyone understood what was said; they also made sure that everyone had a chance to speak in turn. Everyone contributed at least one suggestion and few were reticent in their responses. At the end of each session the group and the leaders categorized the suggestions and asked the group to assign priorities to them. Attendance was almost perfect. Each group produced from 35 to 45 ideas, and several members of the staff commented that the experience had been enlightening. Interest in the study increased perceptively.

After the sessions, the study group evaluated the relative importance of the ideas which came up. Issues were considered significant if they were mentioned in several groups, or received much support in a single group; or if they seemed to the study team to be particularly useful for Carnegie-Mellon. The issue of management methods, for example, how decisions are arrived at and implemented, was mentioned specifically only once, but its validity and relation to other, more tangible problems, gave it more importance in the study team's evaluation. Another such idea was the greater use of library staff in university fund-raising activities. For the most part, however, the problems that came up more than once, in the meeting or in the anonymous comments solicited afterwards, commanded the study team's attention.

The most often expressed area of dissatisfaction was in what everyone chose to call communications - between different departments of the library, between the professional and support staffs, and to departments of the library from the

administration. Members of one department felt those in another department did not understand their problems. Some requested orientation to the entire library, not just their own department, so that departments might understand each other's problems. Several in the support staff expressed the wish that the general nature of the discussion in the monthly professional staff meeting be reported to them soon afterwards. This is done informally in the Technical Processes Department. A similar, more formal arrangement for all of the library was suggested. Some also felt that they should be consulted in decisions made about their particular area of the library, since they might be able to contribute an insight that was not obvious to those who weren't working with it every day. The support staff and professionals alike expressed the need for more written memos from the library administration, covering subjects as varied as new job postings, library schedule changes, names of new employees, and personal notices of births, deaths and weddings.

Several questions were raised about library staffing procedure. Because the procedural handbook has not been updated in years, people were experiencing confusion about the perimeters of their jobs. They wanted a better idea of their areas of responsibility, expectations for the job and its authority. They also wanted more thorough training, as well as more opportunities for advancement. It was recommended that people in each department begin rewriting their section of the library procedural manual, with a committee from the library staff to oversee the final compilation.

Should reference work be confined to reference librarians or can support staff handle easier questions? Those opposed to the latter pointed out that the distinction is not always obvious. Some support staff wanted greater responsibilities while others wanted no greater responsibilities unless accompanied by a larger paycheck. The study team felt this was an area that the Human Resources Task Force should investigate.

Another personnel question was the issue of fringe benefits for part-time employees. At present they receive almost none. Since this is a prerogative of the university administration there is little the library can do; however, it was suggested that a survey of similar institutions might convince the administration of the unfairness of their position. It was suggested that a committee from the staff association might look into this.

There was much dissatisfaction expressed about our method of book selection and our gift policy. Presently, books are chosen by each departmental representative with little or no consultation with the librarians. Very often time is wasted when books are ordered twice (or more), and money is wasted when they're requested after they are out of print. Some feel that serious gaps have resulted in the collection because faculty representatives with a particular area of interest tend to order materials primarily in that area. Some librarians would like greater input in order decisions, possibly even a veto power. There is much confusion about our criteria for acceptance of gifts; some staff members involved felt we accept materials whether or not they enhance our collection. The study team recommended that a written policy on gifts be studied.

What is the faculty's role in setting library policy? It was felt that they overstepped their advisory role in policy and attempted to dictate library procedure, e.g. placement of reserve books under a professor's name rather than in Dewey order, or determination of library hours. The study team recommended that this be addressed by the task force studying library policies.

Changes in the procedures connected with our journals were suggested. The Engineering and Science Library, whose patrons depend on journals for most of their information, wanted more feedback built into our check-in-system. They would like vendors to be notified automatically when a journal is not received, or, failing that, always to receive notification when tracers are sent out so that the journals can be monitored more closely. Members of interested departments will meet to set up a system acceptable to both. The problem of mutilated magazines used by the Design Department was discussed and several solutions offered. One possibility was to enlist the help of the students from the design class using the particular journal; another was to suggest that the Design Department buy their own copies of these few journals.

Circulation policies were questioned. Library policy on reserve books requires that they should be filed by Dewey number. Some faculty, however, insist upon having books for their courses filed together, regardless of classification number. In the opinion of some, library rules on return of books are not enforced; there should be a point at which privileges are revoked. Are our fine rates too high, too low? Points were taken on both sides. Other suggestions recommended a standing circulation committee, check-out system for reference books, and a library use manual for library patrons. The study team felt a committee from the readers' service department might look into these problems.

Within ten years the Engineering and Science Library will be out of space, and Hunt Library will be getting very crowded. There were several suggestions on that problem. Dead storage might be available, or we might be able to reclaim some of our space that was given to the Hunt Botanical Library. Microforms are another alternative, but most agreed that our equipment is faulty and that faculty has strongly opposed conversion to microfilm. The charge to the task force on facilities will address this problem.

Some suggestions, such as signs to the rest-rooms and floor plans posted on each floor, did not require study, in the committee's judgment, and were submitted in a memo to the director. Others were acted upon by the departments involved: e.g. the heads of Technical Processes and Engineering and Science scheduled a meeting of both staffs, to discuss some of the points brought up at t ɜ ɔrain-storming. Plans are to make it a regular occurrence.

Many other suggestions came up, from a library cleaning agenda that can be checked by a member of the library staff to more involvement of the librarians in the fund and development office. All were duly noted and discussed by the study team. Then they were categorized by broad subject area and sent around to each staff member for additional comments. The statements will be passed on to the task forces in the form of their charge.

GOALS AND OBJECTIVES

The study team attempted to identify and examine the objectives and goals of Carnegie-Mellon University and the University Libraries. In this way we might understand the place of the library in the University's scheme and relate its program to that of the University Administration. It also could provide a means for the library to work towards using specific performance goals as a standard of library performance.

The study team used the following definitions, as stated in the ALDP Manual, p. 7-2 and 7-3:

Mission: The basic purpose of the organization; the chief function or responsibility of the institution.

Overall Objective: Statements of long-range, broad intent, regarding the means to achieve the mission.

Performance goals: The translation of broad statements of intent (objectives) into shorter-range, more specific, and frequently quantifiable or measurable desired future states.

We applied the following criteria (ALDP Manual, p. 7-4) in judging library goals and objectives:

Objectives should guide the library programs and activities toward achievement of institutional purposes.

They should be reviewed periodically.

Broad statements of intent should lead to the preparation of more specific statements at all levels of the library organization.

They should be capable of achievement.

They should be used as a means to improve library performance and increase effectiveness.

The University goals we consulted were those set out in President Cyert's statement on Goals and Priorities, dated September 20, 1973. A call to his office had confirmed these to be the most recent. A later memo to the president, however, revealed a more recent goal statement. Fortunately, there was not sufficient difference between them to affect the outcome of our discussions. See Appendix F.

The first draft of the proposed library goals which the director would be using in university planning sessions, was made available to the team. This had been drawn up by the director as a set of generally non-controversial objectives for library service. The team superimposed these basic ideas onto the structure that is given in ACRL's "Draft: Standards for College Libraries, 1975 Revision," which is organized into the traditional library categories of collections, organization of materials, services, staff, administration, facilities and budget.

Since there was no established procedure for goals setting, they felt that this would at least constitute a starting point.

The team faced several problems in the discussions. First of all, there was confusion over the meanings of terms. One man's goal seemed to be another man's objective. In Carnegie-Mellon planning statements' hierarchy, the goals come before the objectives. To reduce confusion, the hierarchy in the manual was agreed to, even though it called for a constant re-definition of terms whenever the discussion came up with those who had not read the manual.

We also wrestled with the problem of setting goals that good library service should attain vs. goals that we felt that the Carnegie-Mellon University libraries might reasonably achieve.

Book selection is now carried out for the most part by the faculty departmental representatives. The librarians would like to play a greater role in book selection, possibly to be given a larger discretionary fund for book purchases. Is it practical to include this as a goal? We finally decided to investigate this in research on book selection policy, rather than stating it as a goal.

In our discussions we attempted to assess the now unwritten goals of library service as they would appear to the working staff. In some cases, we also extended the goals beyond what we were doing now to a new service, with hopes that it could be implemented. In reference service, for example, it seemed logical that in the future we might offer free computer bibliographic searches to students in cases where the librarian felt that it was the most efficient way to answer the question. If his/her time would be spent more productively in a quick computer search, and the information would be likely to be more specific to the students' needs, the librarian should have this option.

Another problem encountered in the discussions was some difference between the type of service offered by Hunt and Engineering and Science Libraries and the Mellon Institute Library. For example, because of the Mellon Institute's

budgeting arrangements, it is easy and more efficient for the librarian to order books for research projects that will not necessarily be library property. Hunt and Engineering and Science cannot. Other than that, the team attempted to recommend uniform procedures.

Using the guidelines set in the manual, the university goals, the director's goals, the ACRL standards, and our own experience with library policy and practice plus informal interviews with library staff, the team devised a set of eight goals, each having up to six objectives.

After the goal statement draft was completed, the team selected representatives from each department in the library to react to them. The team also met with the library director whose initial reaction was negative; she did not feel that goals and objectives should be more than a statement of purpose, and were not necessarily quantifiable. Since the whole theory behind our goal setting was in question, we felt we could not proceed any further until that was cleared up. The best thing to do seemed to be to wait, possibly let the Management Task Force re-investigate the issue. Later on, the confusion was resolved, but the study team decided that it still might be useful for the Management Task Force to consider it.

A procedure for evaluating and updating goals was not dealt with at that time, but will be implemented later, either by the study team alone, with the task force or with the director.

SERVICES AND COLLECTIONS TASK FORCE

CHARGE

The Task Force should evaluate the selection policy in the light of institutional goals; consider the potentials and limitations of cooperative acquisitions and its implications for collection development; examine library orientation programs and innovative approaches to supplement traditional library service and suggest ways that the library might assume a more active role in the educational process, particularly in the area of book selection.

In order to fulfill this directive, the Task Force conducted an evaluative and descriptive study of Carnegie-Mellon University library collections and services. A considerable amount of time was devoted to gathering information for this study. Several methods were employed to collect and analyze data:

1. Self evaluation: evidence and statistics derived from examination of library activities, particularly in the areas of reference services, book and journal acquisitions, and collection evaluation.

2. Faculty interviews: thirty-three faculty members were queried with regard to their views and expectations of the library as a resource for teaching and research. The responses pertaining to specific areas of concern have been extracted and analyzed from the interview documents and are presented in the appropriate sections of this report to complement the internal library data. The questions asked, description of the sampling techniques and methods employed for the faculty interviews as well as a detailed presentation of the responses are included in this report and in Appendix B.

3. Student users survey: approximately 1600 students responded to the survey. Designing, administering and coding the questionnaire, and analyzing the information was a lengthy process. (Two months

designing; five months coding, programming and analysis.) Ideally, findings from such an investigation should have been available to the Task Force at the beginning of its mission. Although the analysis of the survey is still rough, there has been some attempt to integrate the findings into this report. Documents relating to the survey, including the questionnaire, are appended, (Appendix C.) The print-out and machine readable data are also available for examination. (Hunt Library Technical Processes.)

DESCRIPTION OF LIBRARY ACTIVITIES

I. Services

Services are provided through the general reference department and also by various special collections.

A. The reference departments* of Hunt, Engineering and Science, and Fine Arts are responsible for the following areas of library activity.

1. Reference and information services, including library instruction and computer searches.

Reference desks are staffed from 8-5 daily by professional reference librarians and, at Hunt only, from 1-5 Sundays. Librarians average nineteen hours per week on duty at the desk.

Reference librarians at Hunt Library and the Engineering and Science Library provide information as well as access to the collection through informal instruction at point of use and through library orientation tours. There are occasional opportunities for the staff to lecture to classes, but this is an underdeveloped facet of Carnegie-Mellon University's library service. Today there are available bibliographic tools of increasing complexity, including the multitude of new indexing and abstracting services now existing as interactive, computerized data bases. For the user to derive maximum benefit from these tools, a librarian's assistance is necessary.

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* Reference department in Mellon Institute discussed separately, p.10

Because all the libraries have limited professional reference staffs, it is imperative that the librarians use their time as efficiently as possible in order to insure the best service in all areas under their jurisdiction. In addition to providing service for patrons in the library, librarians answer telephone queries from university staff, faculty and students. The Carnegie-Mellon personnel may receive answers by telephone to specific inquiries from ready reference sources as well as answers to in-depth questions. Users from outside may also receive answers to reference questions or suggestions for alternate sources of information. Since September of 1977, a count has been kept at Hunt Library Reference of the number, type and duration of queries. Questions taking from two to three minutes, answering requests for "addresses," stating whether Carnegie-Mellon University owns a book ("card catalog") or giving a "direction" have been separated from other reference questions, which require five minutes or more and are not in any of the preceding categories.

Total Reference Questions - Hunt Library

Ready Reference and Research Queries

	September	October	November	December
Directional	336	288	279	200
CC Check	132	127	165	127
Addresses	72	60	105	47
Total Ready Ref.	540	475	549	374
Research	360	323	278	213
Total questions	900	798	827	587

The Engineering and Science, Fine Arts and Mellon Institute librarians have not kept corresponding figures on their reference activities; therefore, no statistics from these collections are available.

From the student user survey it was found that 64% of the students surveyed use Hunt Library, and 72.4% of all requests for assistance originated at Hunt Library. This is, of course, a quantitative description of reference activity and does not necessarily suggest that the time or effort spent in providing information services is less at Engineering and Science than at Hunt. The student survey indicated that Engineering and Science Library

clientele are mostly upperclassmen and graduate students; the users of Hunt Library are more evenly distributed by class level. In the discussion of the student survey, the correlation between need for reference assistance, general library use, and class level is noted.

Computer searches of various data bases are provided by the reference staffs in the three libraries; these data bases are available from commercial suppliers, Lockheed and Systems Development Corporation. The heaviest users of this service are science faculty who hold grants to which they can charge the search costs. Non-grant-supported faculty must fund the search on their own. The per hour connect time charge to access the various databases range from $15 to $150. The average cost for an individual search is $15.

Computer Searches Performed in 1977

E & S	MI	Hunt
67	77	84

The charge for these searches is the main reason that we are unable to expand the service in the university community.

Through an agreement with the University of Pittsburgh's Campus Based Systems Center, the University Libraries are able to conduct free searches of the PIRETS (Pittsburgh Information Retrieval System) databases; Hunt Library uses ERIC (Educational Resources Information Center) through PIRETS, and in 1977 conducted 73 free searches for the faculty.

2. Interlibrary Loan and Use of Oakland-area Libraries.

Librarians at the three libraries borrow on interlibrary loan for faculty and gradute students. The number of individual transactions initiated for faculty and graduate students are as follows:

Interlibrary Loan	1976-77	1975-76	1974-75
Hunt Liarary	207	254	211
E & S	121	127	88
Mellon Institute	30	7	12
Total:	358	388	311

Photocopies received in lieu of interlibrary loan, that is, photocopies of articles in journals that the libraries do not own are as follows:

Photocopy	1976-77	1975-76	1974-75
Hunt Library	70	74	109
E & S	160	201	193
Mellon Institute	501	816	796
Total:	731	1091	1098

At Hunt Library, a greater number of books are requested, while at the other two libraries requests for photocopies are heavier, demonstrating the greater reliance of scientists on journals.

In addition to carrying out the ordinary interlibrary loan transactions, reference librarians locate library materials for students and faculty by telephoning area libraries. This is particularly true at the two science libraries where the librarians have developed a useful liaison with special librarians of Pittsburgh corporations. Undergraduates have the privilege of borrowing from Pittsburgh area libraries when the resources of the Carnegie-Mellon University libraries have been exhausted. Undergraduate borrowing slips, issued because of Carnegie-Mellon University's membership in PRLC, account for a minuscule percentage of annual circulation transactions, but the statistics should be noted:

	1976-77	1975-76
Hunt Library	107	129
E & S	13	21

3. Bibliography and Book Selection.

The librarians perform bibliographic functions with regard to their collections. The following is a brief overview describing the librarians' activities:

Choice magazine, Book Publishing Record, New Technical Books, Directory of Published Proceedings, etc. are among the general reviewing sources used as the basis for book selection. Relevant pages are sent to the faculty representatives, usually accompanied by order slips already inscribed with the bibliographer's selections.

In addition, the librarians order replacements for lost or missing books noted during regular inventory procedures. The librarians exercise judgment in deciding whether or not to repurchase the titles if the subject is obsolete or the book's usefulness is limited by changes in course emphasis. This replacement process is a method of collection development and maintenance.

Gifts are screened by the Head of Technical Processes and/or the Acquisitions Librarian, who make decisions to add titles of current and general interest. The subject librarians, with their special knowledge of the collection and curriculum needs, evaluate the titles to be added when there are problems concerning dated material, copies and relevance.

4. Government Documents.

The library has developed a non-depository collection of government documents to meet specific course needs. Selection, ordering and preliminary processing of these documents is the responsibility of an assistant reference librarian; a budget of $500 is provided annually for their purchase. The documents librarian decides which documents will remain in the collection and which will be integrated into the main book stacks. Access to some documents is provided in the main card catalog, either by full cataloging or by partial bibliographic representation. However, most documents must be located by means of the Monthly Catalog of United States Government Publications with the assistance of a librarian. Assistance is also often required to locate documents in the card catalog since entry forms for these materials tend to be complex.

Information gathered by the student users survey indicates that government documents present problems of access and use for students; this is confirmed by the reference staff. Findings from the student survey concerning documents will be presented in greater detail later in this report.

Library instruction in the use of documents has been made available from time to time in the form of lectures for classes.

B. Special Collections and Services.

Below are descriptions of areas of the libraries which offer information and services to users in formats different from those of the general Reference Departments:

1. Computer Science Browsing Room

Hours are the same as Engineering and Science Library. Primary users of this collection are members of the Computer Science Department and other faculty interested in computer application in their disciplines. The collection is also heavily used for interlibrary loans. A project on developing a bibliographic database including all materials in the collection is currently in progress.

The collection covers the areas of artificial intelligence, pattern recognition, computational complexity, software development, and microprocessing. New acquisitions in these fields remain in the Browsing Room for six months; after that they are shelved in the main stacks. The collection also includes fifty journal titles. In addition there are 2500 technical reports from over one hundred institutions around the world, as well as a collection of 1350 technical reports in microfiche and 140 articles.

The browsing room provides convenient access to specialized, current materials; in addition a microfiche reader printer is available for users' convenience. The faculty members of the Computer Science Department interviewed expressed satisfaction with this arrangement.

Although the salaries of the staff and any items in addition to those purchased by the departmental allocations are funded by the Computer Science Department, it is an integral part of the Engineering and Science Library under the supervision of the Engineering and Science Head.

2. Music Library - Hours:

Scores: 8:30-5:00, Monday through Friday.
Records, tapes: 10:00-4:30, Monday through Saturday.
1:00-4:30, Sunday.
6:45-10:00, Sunday through Friday.

Reference service is given to students and faculty as well as to outside groups who need specific information about materials, programs or persons connected with the musical life of the campus.

The music listening facilities are utilized by various departments for reserve listening assignments. Among the users are the English, history, design, composition, drama, dance, form and analysis, and sight singing classes. Tapes of concerts and performances by faculty and students are stored in the control room, to enable performers to review their work. Music is issued primarily to the students and faculty of the Music Department. Special collections are the J. Henry O'Shea collection of orchestral and chamber music and solo works (circulating); and the William Wymetal bequest of opera

scores, notes and scene designs (non-circulating). Records circulate to faculty for classes only.

The space and facilities in the Music Control Room are currently limited. The music room console is being redesigned and reequipped to improve service. This new installation will require special training and supervision of its use to insure a long life.

3. Slide Room - Hours: 8-5, Monday through Friday.

The collection is a basic teaching tool of the art and architecture departments, and is also used frequently by the history and drama departments as visual supplement to lectures. Slides are made on request (black and white, and color) for courses. The average rate of production is 4000 per year. Reference service is generally available in connection with the slide collection.

Slides circulate to faculty, and to graduate and under-graduate students with special course assignments.

The bulk of the slides are on architecture, urban topography and painting. Sculpture, minor and industrial arts, and special categories (e.g. urban experience) make up the balance. There are about 90,000 slides, some 13,000 of which remain uncataloged.

4. Tech Room - Hours: 9-5, Monday through Friday.

The Tech Room houses the Carnegie-Mellon University archives.

The collection consists of documents, publications, pictorial materials, and artifacts produced at Carnegie-Mellon University (and its predecessors, Carnegie Institute of Technology and Carnegie Technical Schools) by individuals, academic departments, administrative units, and other entities connected with the university; it covers a period of about seventy-five years. Although this collection is incomplete in its scope and informally organized, it has been used by campus members as well as by outside researchers as a primary research facility.

The archivist provides individualized assistance to users and also answers phone and mail inquiries. The findings lists and index are not complete and considerable assistance is required to use this collection. Bound publications, some annual reports, commencement programs, yearbooks, and catalogs are shelved

in an area accessible to reference and circulation personnel, but the bulk of the collection has limited accessibility and the materials do not circulate. The acting archivist has no regular assignment in the Tech Room but is available whenever needed during the hours posted.

5. Audio-Visual Center - Hours: 8-5, Monday through Friday.

The Audio-Visual Center offers projection, sound and video equipment to the campus community on request and preferably upon forty-eight hours advance notice. Production services are also available in the areas of audio, graphics, slide-tape, still photography and television. A small media collection of 16 and 8mm films, filmstrips, cassette-loops, audio and video tapes, records and slide-tape sets, is housed in the Audio-Visual Center and may circulate to users free of charge.

Limited facilities are currently available for free-of-charge previewing and playback of audio, video, slide and film materials at the Audio-Visual Center. In addition, the Audio-Visual Center staff is capable of handling most kinds of video productions in its Studio and/or on remote location.

Technical discussion and recommendations appear in the Technology Task Force report.

6. Fine and Rare Book Room - Hours: 1:30-4:30, Monday through Friday.

The Fine and Rare Book Room provides facilities for student browsing and research, for scholarly research by faculty and off-campus scholars, for classes requiring rare books, and for exhibitions of the collection. The staff provides instruction and information for students and in response to outside requests. Major exhibits of the collection are supplemented by special exhibitions for classes and visiting groups.

The Rare Book Room collection includes books printed from the fifteenth through the eighteenth century, books printed in the United States through 1820 and in Pennsylvania through 1850, editions limited to 100 copies or fewer, manuscripts, fine bindings, first and early editions of importance, selected

book facsimiles, private press books, works by notable presses and printers, illustrated books, rare Bibles, books issued in parts or wrappers, and books otherwise remarkable for a variety of criteria. In addition there are special collections of the following authors: Willa Cather, Winston Churchill, Emily Dickinson, Haniel Long, Christopher Morley, and Gladys Schmitt.

Growth of the collection is dependent on either gifts of books or of special funds to purchase books.

Books in the Rare Book Room may be used only with the permission and supervision of the librarian.

The Fine Book Room contains attractive editions of classics and examples of fine printing. Books in this section do not circulate but may be used in the room without restriction.

7. Mellon Institute Library - Hours: 8:30-5:00, Monday through Friday. Twenty-four hour access, by card lock, to faculty, research staff and graduate students using the Mellon Institute building.

The Mellon Institute Library is the designated library for the chemistry and biological sciences collections. Its primary responsibility is to the departments of chemistry and biological sciences, as well as to the Carnegie-Mellon Institute of Research, the contract research division of Carnegie-Mellon University. In addition to serving these groups, the library is open, during the regular hours, to the entire campus community as well as to the local scientific community. It is located in the Mellon Institute building located one-half mile from the main campus.

The Library functions primarily as a reference collection. Circulation is restricted in that no journals, bound or unbound, current or back volumes, may be taken out, except with special permission. Reserve books are for use in the room only. These regulations are necessary because of the twenty-four hour access. Borrowing privileges are not extended to off-campus users except through interlibrary loans. The Library does not participate in the PRLC Reciprocal Borrowing Agreement.

The Library provides the usual services: reference, bibliographic assistance, photocopying, interlibrary loans. Computer-based literature searching is available and the Library has its own terminal.

The Library does its own cataloging following the L.C. classification. For the last two years, author and title cards for the collection have been integrated into the catalogs of the Hunt and Engineering and Science Libraries. (The journal holdings are integrated in Engineering and Science visible files.) Selected journal titles from Engineering and Science are kept in the Mellon Institute Library's visible files, as well.

In addition to traditional services, the Library offers specialized services: translations, conventional literature searches, current awareness bibliographies (through the Knowledge Availability Services Center at Pitt.) The Library maintains a bibliographic record of all publications by the Mellon Institute of Science and by the Carnegie-Mellon Institute of Research personnel. The Librarian is responsible for the CMIR reprint files. These consist of copies of all CMIR publications as well as off-prints of journal contributions. Requests for copies of reprints are filled from these files. The Library acts as the purchasing agent for books, subscriptions and memberships for the research staff. This practice was instituted at the founding of the library in the interests of efficient purchasing and record keeping. Material costs are, of course, back charged to individual accounts; overhead on these charges contribute to the University operating budget and, therefore, to library support.

Because of the emphasis on advanced research in the sciences, the major portion of the collection consists of journals. An archival collection relating to Mellon Institute history and activities is also maintained, and it is housed in the Library. Graduate students and CMIR research staff are the chief users.

C. Circulation and Reserve Room.

The primary interface with the majority of the libraries' clientele is at the circulation desk of the two on-campus libraries. At Hunt Library the staff exercises the usual circulation duties with regard to materials in the circulating collection as well as supervising the Reserve Room collection. In 1976-77, circulation at Hunt Library was 53,000 items, and at Engineering and Science Library, 30,000 items. During the past five years library circulation has declined slightly in relation to the size of the student body.

Hunt and Engineering and Science circulation departments maintain records of lost and overdue books, collect fines, maintain reserve room records, inventory the collection, shelve books and revise their order. Members of the

regular circulation staffs provide desk supervision during library hours. At Engineering and Science student assistants staff the desk on Sundays and after 5 P.M.; at Hunt there is a regular night supervisor, usually a librarian.

D. Technical Processes.

The Technical Processes Department of the Library provides essential services to library users through its cataloging, catalog maintenance and acquisitions functions. Cataloging is done according to the Dewey decimal system and is performed on the OCLC system. The Hunt Library and Fine Arts catalogs are arranged in a dictionary format, while the Engineering and Science catalog is divided into separate author-title and subject files. The Hunt Library union catalog contains the holdings for the collections housed in Hunt Library and Engineering and Science Library, as well as a main entry and title card for the more recent Mellon Institute acquisitions. In the union catalog are interfiled on-order and in-process slips which inform users about the status of new materials.

The Technical Processes Department handles all acquisitions for Hunt, Engineering and Science and Fine Arts, and also orders all monographs except standing orders, for Mellon Institute. Procedures have been established to deal with "rush" requests: such items are given priority in ordering and cataloging. A considerable effort is made to speed this process. The order department also initiates searches for out-of-print books and provides information concerning book sources to library users.

The OCLC terminal, located in Technical Processing, is also used for locating books to fill interlibrary loan requests and for verifying of bibliographic information. The OCLC system has great potential for providing the Reference Department and users with important bibliographical services.

Expansion of the OCLC machine-readable database would enable the library to produce specialized lists, bibliographies, and in-depth access to the book collection not currently possible.

II. Books and Journals: Resources and Selection

Another part of the self-evaluation procedure was accomplished by the survey and the analysis of the libraries' material resources. In the first part of this section the Task Force has examined budget trends and has explained the allocation procedure in some detail. Patterns of acquisitions for the various academic departments have also been described. A section of this report is devoted to a discussion of the special problems of journal subscriptions. The second part of this section concerns the actual book collection which is compared with standard bibliographic lists in selected subject fields.

A. Resources

A portion of the general library departmental budget is set aside as the materials budget. The largest part of this materials budget includes allocations for such items as periodical subscriptions, government documents, reference books, professional tools, and other general indexes. The Director of University Libraries allocates the remainder of the materials budget to each of the deans of the colleges. (For a description of the allocation procedure see page 21 of the Management Task Force report.)

A library growth rate of 6.5% was recommended by the Carnegie-Mellon University Long Range Planning Committee in 1965, but to date this has not been achieved.[1] There has been both a relative and absolute decline in the number of items purchased annually by the library since inflationary trends have greatly reduced buying power.

Table 1: Library Collection Growth Rate (GR = growth rate.)

Year	Volumes*	GR-Vols.	Materials Funds (budget & special)	GR - Materials Funds	Students	GR Students	Vols. per Student
1971/72	449,941	7.7%	254,970	1%	4285	-1.0%	105
1973/74	469,493	4.3%	280,337	10%	4379	2.0%	107
1974/75	490,407	4.4%	292,667	4.3%	4510	2.9%	108
1975/76	510,822	4.1%	308,166	5.2%	4848	7.4%	105
1976/77	531,301	4.0%	314,277	1.9%	5047	4.1%	105

(* Includes books (monographs) journals, government documents, Carnegie-Mellon University theses and drama production books.)

1. Carnegie-Mellon University Guidelines, 1965. As of 1977, the library has fallen short of the 6.5% goal by approximately 36,000 volumes. In 1978, it would cost nearly $645,000 to make up this deficit at the current price for a monograph - $18.

The growth rate shown above is for all the items processed by the library, including gifts in kind as well as materials purchased with regular and extra-budgetary funds. Although library funding has been increased substantially over this five-year period, the growth rate has fallen from 7.7% in 1972 to 4.0% in 1977. During this period book and journal prices have been subject to inflation that surpassed the general rate.[2] For example, the increase in book prices in 1974-75 was 14.9%; in 1975-76 it was 7.4%.

The average annual rate of increase in journal prices has been about 13.3% for the five-year period. Currently, it has been necessary for the university to augment library resources with extra-budgetary funds; without these funds the library would have been severely hampered in providing needed materials and services.

Moreover, when one considers the actual number of monographs purchased with regular budgetary funds during this period, the picture of library growth seems even more discouraging. Although this category (monographs) is only a fraction of the materials handled by the Technical Processing Department, the trends shown in this area are indicative of the decline in library buying power generally.

Table 2:

Year	1972-73	1973-74	1974-75	1975-76	1976-77
No. Monographs Purchased	9,060	7,704	7,415	7,052	6,019

This decline coincides with the decreased allotment to academic departments, the funds assigned to the deans by the Library Director. Rising costs in serials and journals were offset by reducing departmental allocations.

Table 3: Departmental Allocations

Year	1972-73	1973-74	1974-75	1975-76	1976-77
Budget	$53,975	$54,725	$25,700	$35,000	$37,500

2. The Bowker Annual of Library and Book Trade Information. 23rd ed. (New York; Bowker 1978) pp. 316-326.

1. Books.

In 1976-77 the average cost per volume to the Library was about $15.00. This figure is similar to the national average book price for that year; however, the library is buying books that are more expensive than the national average since library costs reflect the discounted prices offered to library purchasers. In certain fields such as fine arts and science/technology the average costs were $20.50 and $22.00 respectively. It has been especially difficult to maintain collection growth in these areas.

To illustrate what rising prices have meant in terms of collection growth in specific subject areas, a comparison of the purchasing power of the various departmental budget lines for a three-year period is given below in Table 4. This table shows the decline in purchasing power which accounts for the decrease in the collection growth rate. However, it should be noted that there is a certain amount of flexibility in assigning funds. In many cases, after a given departmental allocation is exhausted, the department is permitted to continue to submit purchase requests and to overrun the allocation. Funds unspent by other departments are used to cover these overruns. Outstanding orders not filled within the library's fiscal year are not charged against a departmental allocation but are covered by special contingency funds.

As previously noted, departmental allocations are supplemented by other funds, and books are purchased in various subject areas with money from special budget lines or with extrabudgetary resources. For example, standing orders are not charged against departmental allocations, although standing order items are taken into consideration when the allocations are determined. Standing orders account for many titles issued as parts of series, conference proceedings, blanket orders for publications of scholarly organizations, as well as certain annuals and standard reference editions. The following table (Table 5) indicates the extent to which standing orders and purchases made with special funds supplement regular departmental allocations.

Table 4

Books Purchased by Departmental Allocation, 1974-1977

Numbers in parentheses represent budget allocation; numbers in brackets represent actual department expenditures

	1976-77			1975-76			1974-75		
Department	No.Bks.	Budget	Expend.	No.Bks.	Budget	Expend.	No.Bks.	Budget	Expend.
Chem.Eng	52	($1100)	[$1650]	50	($ 950)	[$1216]	33	($ 400)	[$ 630]
Civil Eng.	53	(1200)	[1377]	70	(1000)	[1175]	49	(750)	[898]
Elec.Eng.	105	(2000)	[2962]	92	(2000)	[2062]	95	(1700)	[2020]
Mech.Eng.	55	(1200)	[1519]	61	(1000)	[1313]	25	(800)	[666]
MMS	21	(800)	[819]	22	(800)	[822]	22	(700)	[647]
Biotech	14	(300)	[318]	13	(250)	[428]	11	(225)	[183]
E&PP	3	(100)	[37]	6	(100)	[93]	4	(100)	[69]
NS&E	11	(300)	[288]	5	(400)	[139]	16	(325)	[387]
Bio.Sci.	31	(1400)	[1492]	24	(1300)	[1162]	13	(1000)	[1064]
Chem.	40	(1400)	[1103]	47	(1300)	[1250]	29	(1000)	[976]
Comp.Sci.	249	(1400)	[5452]	91	(1300)	[1554]	54	(1000)	[1005]
Math	55	(1400)	[1099]	73	(1300)	[2290]	95	(1000)	[1268]
Physics	92	(1400)	[2356]	79	(1300)	[2289]	85	(1000)	[601]
Arch.	84	(2250)	[2043]	69	(1750)	[1368]	106	(1500)	[1685]
Design	21	(750)	[282]	24	(800)	[400]	36	(750)	[710]
Drama	18	(750)	[162]	37	(750)	[670]	26	(1000)	[209]
Music	78	(1000)	[936]	59	(750)	[951]	60	(450)	[507]
Art (P&S)	41	(1500)	[708]	81	(1500)	[1154]	91	(750)	[1329]
English	290	(2200)	[2579]	287	(2200)		277	(2050)	[2375]
History	190	(2300)	[2470]	201	(2200)		225	(2050)	[2464]
Mod.Lang.	132	(1200)	[1092]	111	(1200)		318	(1100)	[1112]
Phil.	25	(650)	[301]	62	(650)		65	(600)	[676]
Psych.	105	(1600)	[1665]	72	(1500)		104	(1200)	[1250]
Soc.Sci.	31	(1050)	[317]	58	(750)		10		
SUPA	47	(1500)	[750]	86	(1500)	[1131]	75	(500)	[668]
GSIA	279	(5850)	[3999]	333	(5400)	[5023]	232	(3000)	[2458]
Stat.	27	(650)	[408]	25	(600)	[518]	50	(500)	[1280]

Table 5

Budget 1975-76

	Books Acquired on Budget	Total No. of Books Acquired
CIT		
Chemical Engineering	50	67
Civil Engineering	70	73
Electrical Engineering	92	113
Mechanical Engineering	61	89
Metallurgy & Materials Science	22	33
INTERDISCIPLINARY		
Biomedical Technology	13	13
Engineering & Public Policy	5	5
Nuclear Science & Engineering	5	6
MIS		
Biological Sciences	24	24
Chemistry	47	102
Computer Science	91	105
Mathematics	73	170
Physics	79	106
FINE ARTS		
Architecture	69	140
Design	24	25
Drama	37	42
Music	59	90
Art	81	89
H&SS		
English	287	562
History	201	662
Modern Languages	111	618
Philosophy	62	102
Psychology	72	77
Social Science	58	58
GSIA		
Statistics	25	26
GSIA	333	385
SUPA		
POLITICAL SCIENCE	86	111
SOCIOLOGY		

2. Journals.

The journal situation is particularly bleak. The inflation rate for journals has forced the university libraries not only to cancel subscriptions in order to purchase new ones but, what is even worse, to reduce the total number of subscriptions.

As Table 6 below shows, the total number of journal holdings has been reduced from 3,584 in 1972/1973 to 2,707 in 1976/1977 or by a total of 877 titles for a -24.4% growth rate; at the same time subscription costs rose by 29.0%. Of these 877 titles, 664 titles were cancelled in Hunt Library and Engineering and Science Library and 213 were cancelled in Mellon Institute Library. The budget figures show that the journal subscriptions account for close to 50% of the total materials budget. Increases in the materials budget are immediately swallowed by journals.

In order to make decisions concerning retention, storage, or cancellation of specific journals, it is desirable to conduct studies of journal use. Both Hunt Library and Engineering and Science Libraries have conducted journal use studies. The study at Engineering and Science is still in progress; space is a serious problem for that collection. Ann de Klerk's report on the earlier part of the Engineering and Science study (July 1977) (See Appendix D.) explains the importance of journals in satisfying information needs of scientists and engineers on the one hand and discusses the necessity for containing the periodical budget, on the other.[3]

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3. Harry Kris, "Subscriptions vs Books in a Constant Dollar Budget," College and Research Libraries 29:(March 1978) pp. 105-109.

Table 6

Journal Subscriptions, 1972-1978

	Library	Number of Subscriptions	Cost of Subscriptions	Average Cost per Title	Subscription Growth Rate	Subscription % Cost Increase	% Materials Budget
	HL/E&S	2,998	$ 80,769	$ 26.94			31.7%
1972/73	MI	586	37,775	64.46			
	Total	3,584	118,544	33.07			
	HL/E&S	2,910	99,211	34.09	- 2.9%	22.8%	35.4%
1973/74	MI	528	45,613	86.39	- 9.9	20.7	
	Total	3,438	144,824	42.12	- 4.1	22.1	
	HL/E&S	2,533	88,712	35.15	-12.9	-10.6	30.3
1974/75	MI	396	41,375	104.48	-25.0	- 9.3	
	Total	2,929	130,087	44.41	-14.8	-10.2	
	HL/E&S	2,269	97,051	42.78	-11.6	9.4	31.5
1975/76	MI	396	48,816	123.27	0.0	17.9	
	Total	2,665	145,867	54.74	- 9.0	12.1	
	HL/E&S	2,334	111,591	47.82	+ 2.8	14.9	35.5
1976/77	MI	373	41,423	111.05	- 5.8	-15.1	
	Total	2,707	153,014	56.53	+ 1.5	4.9	

		Growth Rate	% Cost Increase	No. Titles Lost
	HL/E&S	-22.1%	36.9%	664
1972-77	MI	-36.3	9.7	213
	Total	-24.4	29.0	877

% of Materials Budget spent for journals; increase, 1972-77 (HL/E&S) 3.8%

B. Book Selection.

Responsibility for the book collection lies with the faculty of Carnegie-Mellon University.

Library liaison with the faculty for the expenditure of these funds is maintained through the bibliographic channels set up in the library and originating in the natural division existing in the subject or discipline libraries.

In order to evaluate how well this system is working, the Task Force has to evaluate the collection with respect to how well it serves the educational goals of the university. Qualitative as well as quantitative methods have been applied to the analysis of the collection in an attempt to assess the past, current and projected patterns of growth.

Departmental profiles for several very different disciplines can be seen in the following pages as an attempt to correlate the statistics on holdings, expenditures and use. These departmental profiles were compiled by combining library-generated statistics on circulation and reserve book room use with the information gathered from the faculty and student surveys. (A detailed explanation concerning the derivation of this information is included in the sections devoted to the surveys below.)

Books for College Libraries (BCL) was selected as the bibliography that could be applied to the collection to give qualitative benchmark. Also, New Technical Books (NTB) was searched at the catalog for a six month period in almost all technical subject areas in order to attain "currency" benchmarks in the sciences collection. Since these evaluative techniques were needed, every entry in the bibliographies was searched for in the subject areas on which we are reporting. This activity is seen as a continuing evaluative process, and since the evaluation is not yet complete, there are subject areas that will escape this report because of time limitations. However, we are imposing these benchmark criteria to all subject areas of the collection and will eventually be able to define departmental collections in accordance with the format that follows. The number of journal subscriptions assigned to a department is indicated whenever this information is readily available. The assignment of journals is not always clearly defined by department.

Departmental profiles have been constructed for Physics, Chemical Engineering, Music, Painting and Sculpture, Architecture, Design, English, and History. The departmental rankings by use refer to the faculty use statistics employed in setting up the faculty survey. (See Appendix B) Student use of the collection is indicated

separately; these statistics are derived from the student survey and do not coincide with faculty-use rankings. Since we are discussing the adequacy of the book collection, which is, to a large extent, the "responsibility" of the faculty, it is important to indicate faculty involvement in library activities which influences, to some extent, student use.

Physics

The Physics Department is characterized as a high-use department.

The Physics allocation has increased from $1000 in 1974-75 to $1400 in 1976-77; expenditures have risen from $601 to $2356. In 1976-77 the average price of a physics book purchased for the library was $25.50.

The Physics section of BCL was checked against the card catalog; it was found that the libraries held 400 of the 447 items in the list or 89% of the titles.

Works listed in BCL were published over a period of time, from before the 1950's through the 1970's. Carnegie-Mellon University libraries showed a greater lack of more recent items than of earlier publication; this seems to give some evidence of slippage in current purchases even in one of our stronger subject areas.

BCL does not include either foreign titles or conference publications, and, therefore, it does not give a true indication of the extent of our physics holdings. By checking the card catalog under Relativity and Quantum Theory, a substantial number of foreign language titles, works in German, French, and Russian, were found.

In addition to BCL, NTB was also used to evaluate the physics collection for recently published materials. Carnegie-Mellon University held 56% (476/850) of the works listed in NTB for a six-month period. Because NTB contains items categorically excluded from BCL such as conference proceedings and foreign-language publications, it provides a standard against which to measure Carnegie-Mellon University's holdings in those categories.

There are 31 standing orders and 106 journal subscriptions assigned to the Physics Department. Carnegie-Mellon University journal holdings in physics represent 62% (212/342) of the titles listed in Physics Abstracts, 1976.

The results of our interview with two members of the Physics faculty indicate that they consider the book collection and journal holdings adequate; their overall evaluation of total library resources is that they are adequate. Despite this satisfaction with library resources, one faculty member interviewed said that he sent students to other libraries for material not in the collection. Both teachers interviewed said that they make suggestions for additional outside readings during class lectures.

Physics students comprised about 3% of the library users samples; this places them in a middle-ranking category numerically among the student user population.

Chemical Engineering

The Chemical Engineering Department is a middle-ranking user of the library, as defined by the criteria employed in the faculty survey.

Over a three-year period of time, the Chemical Engineering Department consistently overspent its library budget allocation. The allocation was increased to $1100 in 1976-77 from $400 in 1974-75; expenditures increased over that period from $630 to $1650. Book prices in chemical engineering tend to be quite high and the budget allocation has not provided for great collection growth. In 1976-77, the average price of a book in chemical engineering was $32.50.

Carnegie-Mellon University holds 62.8% of the items listed in BCL, TP group of the Library of Congress classification scheme, and 41% of the titles listed in a selected run of NTB. Thirteen standing order titles are assigned to chemical engineering.

In evaluating the chemical engineering holdings it should be noted that this discipline, like many engineering disciplines, draws heavily on materials from other subject areas, particularly from the science with which it is allied. For example, approximately 60 titles are received as standing orders assigned to chemistry, and persons interested in chemical engineering frequently consult many of these items. Furthermore, standing order titles include many conference proceedings, continuations, and reference materials, some in foreign languages; certain of these are categorically excluded from the BCL listing.

The faculty member interviewed by the Task Force indicated that he considered the book and journal collection adequate and total library resources very adequate. He supplies the students with lists of required readings and also makes suggestions for additional outside reading during class.

Student use of the library comprised 6.6% of library survey population. This was relatively high use.

Fine Arts

Several disciplines using the Fine Arts collection on the fourth floor of Hunt Library were evaluated by comparing Carnegie-Mellon University's holdings with listings in Books for College Libraries. These disciplines formed two general groupings: music and the visual fine arts.

Music

The Music Deparament is rated as a low-level-of use department.* However,

* Music Listening room collection was not included in this study.

the trends in book purchasing over a three-year period would indicate that there is interest in the library collection by members of the department. In 1974-75 the book allocation was $450; this rose to $1000 by 1976-77. At the same time expenditures rose from $507 to $936. It should be noted that from this budget allocation Music must select many non-book items, including phonograph records as well as some musical scores. In 1976-77 the average price of an item purchased with the music allocation was $12.00.

Carnegie-Mellon University holds 74% of the total number of titles listed in BCL for music books (691/923). The only area of outstanding weakness was jazz with less than half the recommended titles: very few courses in this area are taught at Carnegie-Mellon University. The library held 75% of recommended titles in biography and almost every title listed in bibliography, music theory, musical instruments and musical form. Approximately twenty-six standing orders are assigned to music. These include: symposia, continuation series in several languages, blanket orders from scholarly presses and societies, and a record subscription service.

The faculty member who was selected to be interviewed felt that most of the questions were not relevant to his field, to the course he teaches, since he has little need for a book or journal collection. His students are required to purchase musical scores and textbooks. He considers the library adequate for his needs.

Visual Fine Arts

This category includes Painting and Sculpture, Architecture and Design. These departments will be discussed, for the most part, as a unit since there is a good deal of overlap in their coverage and materials.

Painting and Sculpture

This deparament is a middle-use department. The Painting and Sculpture library allocation has doubled from 1974 to 1977, increasing from $750 to $1500. The expenditure pattern has actually shown a decline: $1329 in 1974-75, $1154 in 1975-76, and $708 in 1976-77. The average price of a work purchased in 1976-77 was $17.50.

The two Painting and Sculpture faculty members interviewed recommend use of the library to their students; both considered journals adequate but disagreed about the adequacy of the book collection, indicating that it was in poor condition, declining in size and lacking in contemporary materials. Both considered the slide collection very inadequate with poor quantity and quality and poor access. They both indicated that the reference collection has declined. On the question requesting an evaluation of total library resources they hedged

their response of "adequate" by stating that there were notable strengths and weaknesses. They make informal suggestions for reading during class and direct students to area libraries.

Architecture

This is a high-use department, whose allocation in 1974-75 was $1500, by 1976-77 it was $2250. During the same period, expenditures rose from $1685 to $2043. The average price of a book purchase in 1976-77 was $24.50.

The two members of the Architecture faculty were asked to comment on the adequacy of the collection: one stated that books and journals were adequate, slides not adequate. The other faculty member declined to comment on the collection, stating that it was irrelevant to his interests. Both teachers make suggested readings, and one issues lists of required readings.

Design

The Design Department is a middle to low-ranging library user, whose budget allocation has remained constant at $750 from 1974-76 (it was increased somewhat in 1975-76 to $800). Expenditures have declined in this three-year period from $710 to $282. The average price of a book is about $13.50.

The professor who was interviewed in the Design faculty recommends use of the library to his students and suggests informal readings during class lectures. He considers the book collection adequate, the journal holdings very adequate. However, he rates slides and films inadequate. He does not direct students to other libraries.

In the visual fine arts, Carnegie-Mellon University held 67% of the titles listed in Books for College Libraries (1299/1915.) Strengths of the Carnegie-Mellon University collection include reference works such as encyclopedias and dictionaries, general works on medieval art and architecture, architectural history, Asian and African art, modern architecture, U.S. architecture, city planning, and nineteenth century art. Weaknesses of the Carnegie-Mellon University collection were found in the areas of graphic arts, ancient, domestic, and religious architecture, sculpture, specific painters, and art museums and galleries.

Painting and sculpture weaknesses are in part due to the high rate of loss of library books in these fields. The strengths reflect, to a large extent, interest by individual faculty members in a particular field or strong

sections of departments such as city planning, a field supported by both the Architecture Department and the School of Urban and Public Affairs.

In the visual fine arts a considerable number of works are received under standing order plans: Architecture, 30; Painting and Sculpture, 22; Design, 6.

The Fine Arts departments have certain characteristics which distinguish them from other areas of the university: a large number of course offerings in studio-laboratory formats and a relatively high percentage of faculty members holding part-time adjunct, or visiting appointments: Music, 46.57%; Architecture, 27.8%; Painting and Sculpture, 22.2%; Design, 37.5%.

Students in the College of Fine Arts represent 22% of the library user sample: Architecture, 7.7%; Fine Arts 4.4%; Music, 3.4%; Design 3.4%; (Drama, 2.4%, is not included in this evaluation.)

Comments on the survey indicate considerable student dissatisfaction with certain areas of the fine arts collection: contemporary architecture, slides and records. The music listening facilities were mentioned as deficient at least 47 times; steps are now being taken to upgrade this facility.

Humanities

History

The History Department ranks as a high-use department. Its allocation in 1974-75 was $2050, in 1976-77, $2300. Actual expenditures during that period were fairly constant, $2464-2470. The average price of a book in this field was $13. The History Department receives 22 standing order titles. In addition, special funds have been available to supplement the regular budgetary allocation; these have made possible the purchase of a substantial number of new titles.

Books for College Libraries cites 2768 titles in U. S. History, of which Hunt Library holds 1914 or 69%. However, a striking number of works lacking appeared in two sections of the bibliography, the preliminary section dealing with the aborigine and explorers of the New World and the final section devoted to U. S. regional and state history. In these two sections totaling 768 titles, Hunt Library lacks 50% of the works cited. If we omit these two sections which were not in the history curriculum and recalculate the numbers of titles held in U. S. History, we come out with a new figure of 76% which is a more accurate indicator.

In the area of general European history, Hunt Library holds a total of 1055 titles out of 1762, or 60%. Again, strengths are evident in the history of Great Britain where there are holdings of 64% and in Russian history with the holdings of 78%. Relative strength shows in the history of France and Germany, thus emphasizing the focus of teaching efforts of the department.

In summary, exclusive of the Asian history section of the bibliography which has not yet been checked at the catalog, Hunt Library owns 3542 titles of the 5440 listed in history, or 65% of the total. Strengths are evident in the collection in the subject areas emphasized in the curriculum, i.e., U. S. history and modern European history of the great power countries.

All three faculty members interviewed recommend use of the library, issue lists of required readings and make informal suggestions for reading as well. They all consider the book collection adequate but there was a comment that the collection should be "kept up to date." Only one teacher considers the journal holdings adequate; two did not respond to that question. Two faculty members use textbooks and two send students to area libraries.

History students were 2.3% of the library users sample, a low-middle ranking.

English

The English Department ranks as a middle-level library user.

The English library allocation rose from $2050 in 1974-75 to $2200 in 1976-77. The expenditure increased slightly from $2375 to $2579. English also has had the benefit of supplementary special funds which added substantially to the growth of the collection in this general area.

Sixty-three standing orders are assigned to English. In 1976-77 the average price of a book was $9.00.

Hunt Library holds 64% or 2767 titles out of 4317 cited in the English literature section of BCL. The Shakespeare holdings of Hunt Library are strong with only about .09% lacking. Major authors of the eighteenth century show strong representation, especially such authors as Johnson, Milton and Fielding. In fact, relative strength is remarked throughout the bibliography up to the section dealing with twentieth century literature. For instance, for eighty-nine pages, or for up to 85% of the bibliography, the percentage of works owned can be averaged at 69%. It is not until holdings for twentieth century authors are searched that we see a great increase in missing items. We can contrast relatively strong holdings in the twentieth century in Conrad, Huxley, and E. M. Forster against mediocre holdings of

works by William Sansom, Ronald Firbank, Ford M. Ford, Colin Wilson, Brigid Brophy, William Davies, etc. In fact, of a total of 559 items on the last eighteen pages, Hunt Library lacks 287 works or 51%.

Hunt Library has a much stronger collection of American literature, owning 72% of the works cited in BCL. The American literature section of the bibliography shows analogous strengths and weaknesses relative to an absolute time period as in the English literature section. That is, works of contemporary literature are lacking in greater numbers after 1951 than before that time. For the first half of the twentieth century, the collection shows strength ith 76% of works cited owned. Some authors under-represented up to 1950 are Wittar Bynner, Robert Creeley, Edward Dahlberg, Caroline Gordan, Paul Horgan, Jack London, Don Marquis. The works of very contemporary authors under-represented include Paul Bowles, Joan Didion, Hortense Calisher, and William Eastlake.

The two faculty members interviewed indicated that they considered total library resources adequate for the teaching of undergraduates, that books and journals were very adequate. Both teachers direct students to area libraries, give students lists of required and suggested readings.

Among library users sampled, English ranked as a middle-use student contingent, making 2.9% of the sample.

III. Library Users' Survey.

The Task Force on Services and Collections conducted two surveys of library users, faculty and students. It was felt by the Task Force that since these two groups had different needs and patterns of use in regard to the library, questions should be designed with a faculty or student point of view in mind. The Task Force was guided in its construction of the survey questionnaires by faculty advisors familiar with social science survey techniques; the ALDP Manual suggested some general lines of inquiry which the committee tailored to meet its specific needs. Although it was recognized that a full survey of the entire campus would ultimately be the most valid type of study for determining patterns of library use and opinions about the library, there was neither sufficient time nor resources to allow for this kind of undertaking.

A. Faculty Users Survey

The Task Force on Services and Collections had as one of its major objectives the design and implementation of a survey of the library use of university faculty. Given constraints on time, personnel and survey costs, the committee's decision, based on consultant's advice, was to select faculty users who best represented their department's use of the Reserve and general book collection. A 10% sample of this user population was then interviewed. It must be emphasized here that the sample size is very small and the sample was unscientifically taken since it excluded all non-users and was not randomized. Thus no statistical significance can be ascribed to the survey but certain interesting results can be deduced from the data that will be useful to our study. In addition, the survey responses have helped to provide a basis for a delineation of a library-use profile for each department, above. Appendix I contains a full description of the method used to select the interviewees.

In the attached chart one can see that the sample of faculty in Computer Science* were unanimous in their concept of the adequacy of the library's holdings of books and journals in their field and eight of nine Science faculty considered the book collection adequate while seven of nine Science faculty considered journal holdings adequate. Fine Arts members interviewed were, on the contrary, less satisfied with the book collection (3 out of 6 approved) than they were with journal holdings (4 out of 6 approved). At first glance Humanities and Social Science faculty confound our supposed understanding of their use of the library by being less satisfied with journal holdings (4 out of 8 approved) than with the book collection (5 out of 8 approved). This can be explained by the fact that History faculty members had "no opinion" on journal holdings thereby creating the spread of data on this question when the responses of Psychology, English and Modern Languages became more significant.

In the "recap" question seeking final opinion on total library resources, a few surprising things happened. The two Science faculty who expressed unhappiness with journal holdings retained this negative feeling strongly

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* Because Computer Science Browsing Room is funded by the Computer Science Department, it has been discussed in the survey as if it were a school. The separation of this departmental library from consideration with the science library was a conscious attempt to evaluate the services and collections separately.

enough to vote for inadequacy of total library resources. On the contrary, the Fine Arts faculty, who had found a good deal wrong with the book collection, (3 out of 6 approved) all reconsidered their previous responses and thought the total resources were generally adequate. Part of the answer to this might lie in the context of the next question.

We had hoped to be able to make some kind of correlation between faculty evaluation of the libraries' resources and faculty referral of students to area libraries. The data shows that Fine Arts faculty and Computer Science faculty were 100% affirmative in their evaluation of library resources and yet both schools' faculty (Fine Arts 5 out of 6; Computer Science 1 out of 2) recommend area libraries to their students. If we go back and look at individual responses of Fine Arts faculty to the questions on evaluation of book collection and journal holdings, we see that there is a great lack of unanimity of approval of the book collection (3 out of 6) and only (4 out of 6) a moderate approval of journal holdings. This conflicting data from the faculty of Fine Arts on their evaluation of total library holdings compared to their separate ratings for books and journals when correlated with their large (5 out of 6) referral of students to area libraries must make us suspect their later unanimous affirmation of the library. Were they just saying what they thought we wanted to hear? Do they use area libraries as enrichment resources? In the case of Computer Science there was complete satisfaction with the resources of their departmental library and yet one of the two faculty felt it necessary to use area resources. In accord with above information, six of nine Science faculty sampled responded affirmatively to the recap question on total library resources and yet the same number (6 out of 9) refer students to other libraries. School of Urban and Public Affairs (SUPA) consistently rated books, journals, total resources inadequate and directed students to area libraries. In summary, we cannot make the correlation between faculty evaluation of the library and their referral of students to area libraries because of the lack of sharper distinctions in the questions. For example, Fine Arts faculty sampled were in 100% approval of total library resources and yet almost all (83%) also referred students to area libraries. Why? We should have asked for both a sharper delineation of how often referral was made and a numerical definition of "adequacy" as it relates to definition of library resources.

More clear-cut information can be obtained from the data on library instruction. Although many faculty members hedged their affirmative responses

to the question, i.e., "short lectures," in the library, not during class," etc., we have 19 out of 29 faculty responding favorably to some form of library instruction.

"Required readings" were defined as being lists or bibliographies issued by faculty with some expectation that students would have to read the materials cited in the list. (We were looking for a correlation here between faculty expectations with regard to extra-text book readings and student use of the book collection.) That is, since these are required readings, the expectation of both faculty and students would be that the material cited would be held by Carnegie-Mellon University libraries. We were looking for a correlation between this question which we put to the faculty in the faculty survey and the book collection use by the students as cited in the student survey.

Required readings were assigned by 100% of the faculty of H & SS and GSIA, and 50% of Fine Arts and Computer Science faculty. Science faculty are only 22% involved in issuing reading lists; however, a larger proportion, 66-2/3% of the Science faculty make informal suggestions for reading to their students during class lectures.

Very few faculty members expressed opinions on films, records or slides except in the instructional divisions where such media are relevant for use as teaching aids. Slides were considered "very inadequate" by three members of Fine Arts but were considered adequate by three members of H & SS. Films were considered inadequate by two members of H & SS, one teacher in Fine Arts and one in Science. Records and tapes were cited by only one faculty member in Fine Arts as being inadequate while two others considered the record collection adequate.

The majority of the faculty would appear to be willing to use microforms for some informational needs if space-saving exigencies should warrant such an approach. Nineteen of the faculty, although most restricted their affirmation in some way, would be willing to have some journals on some form of microforms. Scientists including mathematicians plus two social scientists were adamant about their inability to utilize materials in microform, citing their need to be able to read subscripts in formulae.

Almost all the faculty sampled indicated that they order books for the library. This response demonstrates a commitment to provide library support for teaching.

B. Student Survey

The student survey was conducted during the week November 28-December 2, 1977. Students were selected at random to fill out the questionnaire. The methodology of the Washington University users' survey[4] was used as a guide for determining the distribution schedule of questionnaires. Prior to administering the survey, a count of library users was taken at Hunt and Engineering and Science Libraries for a week. The count, taken automatically by the exit turnstyle mechanism, was kept for each day according to general time periods; between 8 AM and 5 PM on weekdays, after 5 PM on weekdays, and on Saturdays or Sundays. This determined the total library population for the week and the percentage of library users for each time period. The Task Force decided to take 10% of the total student library population to survey, or about 2000 persons. This number was apportioned to the various times of weekday and week-end use according to the actual percentage of the total for the time period. The survey questionnaires were distributed to students in the Hunt and Engineering and Science Libraries by library personnel. Students were requested to complete the survey until the required number of questionnaires for the given time period had been completed. The coding which required about fifty work-hours, was accomplished by library staff members. The coded information was transformed into a machine-readable database using the TEXTED'TOR which was later tabulated and collated using the Social Science Statistical Package program.

The survey was designed by members of the Task Force with the assistance of a faculty member experienced in this type of activity. It was hoped that responses would provide information on the composition of student library clientele, use of reference resources and personnel, search strategies employed, degree of success achieved in locating various types of reference materials, and student interest in library instruction. It was also hoped that it would be possible to correlate certain categories of information, and to analyze the differences in library use and needs of various student groups. Understanding these differences would enable the library to provide improved and new services for specific groups of students.

The questionnaire did not prove to be completely satisfactory. Not all the questions were interpreted by those surveyed as the Task Force had intended. For example, students were supposed to refer to the library visit

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4. Olin Library, Washington University, 1972-73

just completed in answering the questions. This was not consistently observed. Undoubtedly, there were ambiguities in the wording of some of the questions which accentuated the problem of uniform interpretation of the questions.

However, the library survey, despite its limitations, does enable us to examine patterns of library use and need. From this examination one can determine which types of library materials pose difficulties for students.

The responses to each question and sub-question have been tabulated and expressed as percentages; these figures have been noted on the questionnaire sheets which are appended to this report. (Appendix II.) A detailed analysis of responses and correlation of information is provided in this appendix. Below is a brief overview of the survey's findings.

The survey results indicated that a cross-section of the campus population uses the library for a variety of purposes. The distribution in the library of students by class-level and college affiliation compares well with their distribution in the university as a whole. Although students use the library for a variety of reasons, the most commonly stated purposes of a library visit were "study - homework" and reserve book room use. Students achieved a fairly high success rate in locating books (58.9%.) The rate of success declined when other media were sought: periodicals 55%, government documents 34.5%, records 43.5%, prints/slides 44.6%, microforms 50.5%. About 30% asked for reference assistance. These materials were requested in the following frequency: books 12.8%, periodicals 10.6%, and government documents 5.4%. Since only 30% requested reference assistance in locating materials, it must be assumed that failure to locate materials cannot always be attributed to the library's collection deficiency. Users are most inclined to use the card catalog (54.7%) or periodical indexes (17.4%) as finding tools, although a sizable number of users locate materials by browsing (21.2%.)

Over half (57.1%) replied affirmatively to the desirability of library instruction. There was a strong positive correlation between frequency of use and interest in library instruction. Freshmen expressed the most interest in library instruction.

The comment section of the student questionnaire provided some very interesting information and opinions on the library. Topics covered included such diverse concerns as the book collection, library hours, noise and crowding and library staff.

IV. Conclusions and Recommendations - General

The library faculty recognizes its responsibility to inform the teaching faculty of the resources and services available in the library. Many faculty have indicated that they are not familiar with such library procedures as book ordering and reserve lists. Therefore, it is incumbent on the librarians to communicate effectively the proper procedures for ordering materials. The library is not always made aware of university plans regarding curriculum planning, introduction of new programs, and other matters that possibly concern the availability of library resources. (See Management Task Force, Planning, p.4-5.)

The Task Force has begun to design rudimentary profiles for academic departments, containing information on the scope of the teaching and research interests of department members. We recommend that these profiles be expanded so that the library will be able to anticipate certain faculty needs and thereby provide improved bibliographic service and information concerning library materials in specific disciplines.

In order to implement this recommendation it will be necessary for additional librarians to act as liaisons with the teaching faculty. This library-faculty communication system will have implications for specific areas of library activities, particularly library instruction and book selection; this will be discussed below.

The second general conclusion we have drawn from this study is that the level of financial support for the library has been too low. The fact that the libraries' percentage of the university's budget is below average compared with other institutions has been stated previously, most recently in The Middle States Association's Evaluation.[5] Moreover, the Task Force will recommend that the library undertake new projects and offer more, not fewer, services. It is clear that some of these new activities which will benefit the user community will require additional funds. Although it may be necessary to rethink the current materials allocation system and reassign funds according to new priorities, it will undoubtedly be necessary to have greater financial resources than are currently available.

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5. A Report to the Faculty Administration Trustees and Students of Carnegie-Mellon University, by an Evaluation Team Representing the Commission on Higher Education of the Middle States Association. Nov. 1976.

A. Conclusions and Recommendations - Services.

("Services" including instruction, computerized bibliographic searching and reference services is applicable to all subject reference divisions.)

1. Library Instruction

The Task Force has concluded that a program of library instruction is definitely needed. This has been made apparent in several areas.

The library is currently offering its users the possibility of using sophisticated research tools including on-line literature searching via computer databases, and various specialized abstracting and indexing services. The potential value of these resources will be apparent to users only when they have been informed about them and trained in their use. Usually a librarian provides assistance in using computerized databases; it is, however, necessary for users to understand the scope of this service.

Another area of concern to Reference in regard to library use is government documents. The student survey indicated that government documents as a category of material, give users greater difficulty than any other. For one thing the user is not always aware that the information sought will be contained in a government document. Moreover, the arrangement of government documents and their access tools are different from those of other library materials - they are not "browsable."

The student survey also pointed out that among those heavy users of government documents were students in SUPA and GSIA as well as those from H & SS; yet students from only one department, History, have been formally exposed to instruction in document use.

Support for some format of library instruction was expressed by the majority of faculty and students. From data obtained on the faculty survey, 19 out of 33 of the faculty expressed interest in some form of library instruction. Engineering and Science faculty interviewed responded more favorably to this projected service than either Social Science or Fine Arts. Almost 59% of the students sampled who use the library from two to three times a week indicated an interest in some form of instruction.

The Task Force recommends that by September 1978 a committee on library instruction be set up composed of librarians representing the various departments of the library such as science, social sciences, fine arts and

audio-visual services. This committee should be composed of not more than four persons in order to facilitate the planning and writing of a library policy on instruction.

The first goal of the committee should be to write a policy, establishing guidelines for instructional programs for all types of instruction from orientation tours to in-class bibliographic lectures in the subject disciplines. The second goal should be the setting up of an expanded committee or forum of librarians interested in instruction who would implement the written policy.

2. Computerized Literature Searches

This facility has been available, but because it requires payment, which in some cases is considerable, it is used mostly by holders of research grants.

The Task Force recommends that the university subsidize, in part, computer searches by establishing a separate library fund for this purpose and at least $1,000 should be assigned to this fund. The existence of such a fund would permit reference librarians to search computerized databases as a service to clientele unable to pay for such bibliographic searches. Computer-generated bibliographies would be an adjunct service to our academic community and would extend the quality of the reference service that librarians can provide. In addition, decisions concerning purchase of printed bibliographical tools, especially those abstracts and indexes absorbed by the data services, can be made weighing the relative costs of purchase against costs of a computer search.

3. Reference Personnel

Phone queries and ready-reference questions consume considerable amounts of librarians' desk time. Some of these activities do not utilize professional abilities and training to the fullest extent.

From the preceding discussion of reference activities of the libraries, it is evident that the time of the present professional staff is fully utilized by reference desk assignments and by other activities such as government documents administration and book selection. The concept of active librarianship embodied in services such as library instruction and expanded use of computerized information retrieval is necessary for the development of the library on this campus.

In order to implement these new services, more professional time is required. This time could be provided by hiring additional professional reference librarians, or training para-professionals to provide service for ready-reference

and directional queries, thus releasing the present professional staff from some of their current responsibilities. If the latter course of action were undertaken, para-professionals, who staff the library on weekends and evenings, would be able to provide users with enhanced library service during those hours when there is now usually no professional or trained assistance available. (Both students and faculty have remarked on this lack of assistance.)

4. Financial Support for Reference Services and Materials

The funds for reference materials have been less than adequate. General reference materials are purchased with money from a general budget line. Reference works in specific subject areas are often purchased with special gift funds, or with departmental allocations. Academic departments, however, have not always been diligent in recommending purchase of new reference items. A comparison of our holdings with New Technical Books, revealed a distinct deficiency in reference works in subjects covered by this listing. Older editions have not necessarily been updated. Faculty assume that the library updates and purchases reference works as a matter of course, but this is not always the case.

It is recommended that more funds be made available for reference materials, preferably as part of the regular annual budget allocation, and that these funds be at the disposal of the reference departments.

With the sharp decline in the growth rate of the book collection it is especially important to assign priority to reference services and to shift the library's emphasis from ownership to access.

With limited resources available in the library, reference services assume increased importance.[6] Furthermore, the tasks of locating information facing the reference librarian becomes more difficult. Therefore it is necessary to maintain a current and comprehensive bibliographic reference collection.

B. Conclusions and Recommendations - Special Collections.

It is apparent that there are acute problems in three of the special collections areas: Music listening, slides, and archives.

1. Music Listening

Equipment maintenance has been a serious problem. This situation was often mentioned by students and faculty; new equipment is currently being installed.

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6. C. James Schmidt, Resource Allocation in University Libraries in 1970's and Beyond," Library Trends 23: (April 1975) pp. 643-648.
Evan Ira Farber, "Limiting College Library Growth: Bane or Boon," Journal of Academic Librarianship 1:12-15, Nov. 1975.

The purchase of records has been very difficult under the current budget system. Funds for records (as well as musical scores) must be taken from the Music Department's allocation for books or are provided by special gift money. It is recommended that funds be allotted for the purchase of musical recordings since this is an essential resource for this institution.

2. Slide Room

Faculty and students expressed dissatisfaction with the quality, scope and accessibility of the slide room. There is a considerable backlog in cataloging, and currently there is no regularly assigned permanent person in charge of the operation of this facility.

A clarification of the position and scope of the slide room is needed before these problems can be remedied. Moreover, it is recommended that slides, as well, be given additional attention and financial support, perhaps from extra budgetary funds.

3. Archives

The archives are currently outside the scope of regular library operations: there is no defined budgetary provision for staff or materials. Yet the archives has great potential as an information and teaching resource for the university community. In order to realize this potential provision must be made for a regular part-time archivist who will be assigned adequate funds and space for developing the Tech Room Collection. If there is no commitment from the university to supply these funds for the support of the archives, the library should consider whether it wishes to use a considerable amount of space as a storage area for university documents. Without this commitment, it is perhaps fruitless to continue the operation of the archives on a sub-standard level. The Task Force recommends that the library make a decision concerning the existence and support of an archival collection.

C. Conclusions and Recommendations - Circulation.

Despite the fact that there was no attempt to question the faculty on the subject of loan policies, three separate instances were recorded by members of the Task Force during the faculty interviews in which faculty complained about the excessive length of the loan period for the faculty. Students also complained in written comments that faculty were allowed to keep books too long. The indefinite faculty loan causes more than a little inconvenience to both faculty

and students especially when repeated requests for return of the book fails to produce the missing title.

Comments on the Student Survey also expressed concern with the three-week loan policy without renewal of books for undergraduates.

Better control of Reserve Room charge-out procedures was seen by at least one faculty member and by many students as being of great importance. Weekend and overnight loans of reserve books create problems at crisis times of the academic year (examination period, end of term.)

The Task Force recommends that a committee be formed to study the issues of faculty loans, student renewal privileges and the tightening of Reserve Room policies.

Evening circulation services, provided up to now solely by student assistants, have not been of uniform quality.

The Task Force recommends that Engineering and Science have a regular night supervisor to insure a reasonable level of service.

D. Collections: Conclusions and Recommendations.

It has been shown above in the various tables how the rate of collection groth has diminished and, in the case of journals, dropped to a minus percentage. This decline has resulted from inadequate financial support. The declining growth rate is more serious than percentage figures indicate since the rate of publication in most fields has not remained constant but has grown significantly. Since the library will never receive all the funding it requires for purchase of materials, it is clear that the funds available will have to be used carefully to produce optimal results. The Task Force therefore recommends that the library generally strengthen its cooperative relationships with other PRLC institutions, both by direct contact with these institutions and by participation in PRLC-sponsored activities.

The major area of concern has been and will continue to be the journal collection. (This subject also discussed by the Technology Task Force.) Journal prices have risen over the period 1975-76 - 1976-77, 9.2%. Journal subscriptions now account for approximately 50% of the materials budget of the Carnegie-Mellon University Libraries. Journals also require substantial amounts of library space which is in limited supply. Two alternatives have been suggested to meet this problem. One involves the use of microform, rather than hardcopy. This will solve the problem of space and binding costs; it will not reduce the financial burden of subscription price increases. The faculty survey indicated little objection to microforms, although a vocal minority of the faculty had, on another occasion, expressed opposition to this alternative.

The second course of action in regard to journals is participation in some sort of cooperative venture in order to obtain journals for users from sources outside of Carnegie-Mellon University. The library is currently exploring the following possibilities:

Membership in the Center for Research Libraries. The H & SS Committee on Information Resources for Research is planning to allocate a portion of the Arthur Vining Davis Fund for membership in The Center for Research Libraries over a period of three years. A survey by the committee of the H & SS faculty revealed that this faculty was troubled by inadequate access to a broad range of journals.

Since the Center for Research Libraries subscribes to 12,000 current journals and lends these journals to member libraries, the H & SS Committee on Information Resources for Research is proposing membership in the CRL in order to explore and evaluate the possibility that such participation will lead to a reduction of the periodical costs in the Carnegie-Mellon University libraries budget. It is possible that demands for new titles will be satisfactorily met by membership in the CRL; and the Carnegie-Mellon University libraries will have greater freedom in cancelling seldom-used titles.

We should also explore the use of the services of commercial document delivery suppliers such as Chemical Abstracts, NTS Service, Institute for Scientific Information, and University Microfilms.

Another feasible solution to the journal problem could be sought on a local level. One method of cooperation in the purchasing of journals would be to coordinate subscriptions, with an awareness and access system to make the title available in a reasonable period of time. The basis for this cooperation could be the organizational structure embodied in the Pittsburgh Regional Library Center.

Ultimately local cooperation could take the form of a central facility, fully staffed and equipped for document delivery, centrally located in the Pittsburgh area in cooperation with other PRLC libraries. (Discussed at greater length by the Technology Task Force.) The Task Force recommends that consideration be given to implementing this last suggestion. The Task Force also recommends that the journal use study be continued as a method of journal evaluation and review.

The state of collections in selected subject fields has been discussed in a previous section. Further study in the patterns of collection use are

desirable in order to determine user needs so that acquisition priorities can be established. Automation of the circulation system currently being explored would certainly be of great assistance in this. Furthermore, interlibrary loan statistics and reciprocal borrowing information may be utilized as tools to evaluate the adequacy of the Carnegie-Mellon University collection. With this information librarians will be able to have valuable input into book selection decisions.

A look at the pattern of library expenditure shows that certain departments are more active than others in the purchase of books. There are at least two explanations for this: one is that some departments need more books than others; the other is that some departments have more active library representatives than others. A department's spending or not spending its book allocations is usually a combination of these reasons. However, the librarians should pursue this matter with departments to insure that library requirements of students and faculty are being met. In some cases it might be desirable to reallocate funds to reflect patterns of need and use.

The Task Force has gathered a considerable amount of quantifiable data, particularly through the student users survey. This information might be useful in planning new programs for the library or in redesigning current library systems. It is recommended that users profiles be developed whith could then serve as the hypothetical variables in a simulation-type study. If we know more about clientele's needs and patterns of use, we will be able to provide appropriate responses to these needs.

The Task Force recognizes that it has made no concrete recommendations concerning the collection. With the information available to it, this group was able only to highlight major problems and to discuss possible solutions to them. The lack of specific assurance on availability of funds, which is an "unknown", precludes making specific recommendations. Moreover, allocation of library resources for materials is a component of a larger process, allocation of total library resources. Decisions concerning resource allocation can be taken only within the context of comprehensive library planning. This Task Force concurs with other Task Forces that a mechanism for library planning should be developed.

SERVICES AND COLLECTIONS TASK FORCE

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MANAGEMENT TASK FORCE

Charge:

The Task Force should assist the study team by examining carefully current library operations with respect to planning, policy-making, budgeting and management information systems. Using the guidelines set out in the manual, you will be paying particular attention to some of the problems identified in our preliminary analyses.

Planning:

How are library plans formulated? How can the library become better informed about university planning and participate in university library planning? Consider possibilities for the library staff to play a larger role.

Policy-making:

There is much confusion about library policies. You should ascertain what policies exist, how they are formulated and kept up-to-date. Consider possible changes in library policy-making procedures.

Budgeting:

The Task Force should examine the allocation of the library budget. Is it fair and reasonable? Our library may not be receiving its fair share of the university budget when compared with similar institutions. Consider whether a case might be made for more money for the library.

Management Information Systems:

You should look at both lateral and vertical communications within the library. Determine whether differing points of view and relevant data are investigated throroughly before management decisions are made. Investigate the possibility of a structure for communicating management decisions.

INTRODUCTION

The Task Force gathered information through reading, interviews and discussions. It was decided to divide the Task Force into four sub-committees: planning, policy, budgeting and management information systems. Each member chose two of the sub-committees on which he or she would like to serve. Information gathered by the smaller groups was reported on and discussed by the whole group.

Members of the sub-committees all wrote sections of the report. For instance, one member wrote the "Strategy" part, another wrote the "Description of Current Practices" and another wrote the "Recommendations". Each of the reports was then extensively revised by the Task Force meeting as a whole and rewritten at least once.

PLANNING

"Planning may be defined as a process of setting objectives, determining courses of action to achieve objectives, allocating resources and evaluating progress toward objectives."[1] At Carnegie-Mellon University planning is done on two levels, university and library.

Strategy

The subgroup on planning did background reading before and during the study. The Association of Research Libraries SPEC KIT No. 13 on Planning Systems was especially useful as it described various ways specific libraries do their planning.

Planning documents of Carnegie-Mellon University and the university libraries were examined. These include the Annual Report of the President for the Academic Year 1975-76, Carnegie-Mellon University, a report prepared for Middle States Association of Colleges and Secondary Schools, November 1976, the 1977 report of the libraries' Microform Committee, and the study by David W. Miller and Judith R. Lave, Library Resources at Carnegie-Mellon and other Universities: a Comparative Investigation, dated October 1977.

Much information came from fourteen interviews with university personnel at all levels from the Vice President for Business Affairs to a clerical assistant in the library.

Task Force discussions centered on finding ways for the staff of the library to be more involved in making plans for the library. There was also discussion of the problem of communicating university plans to the libraries so that library plans can be coordinated.

Current State of Planning

University Planning

Overall university planning is done by the Long Range Planning Committee. It plans major changes, new programs and areas of emphasis within departments. The Committee consists of the Deans, the Vice President for Business Affairs,

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1. J. Murray Atkins Library. University of North Carolina at Charlotte. "Academic Library Development Program: a self study." Dec. 1976. p. 56.

the Director of Planning, the two Provosts and the President of the University. The Committee meets every three weeks during the school year in addition to a summer meeting. Each dean submits individual 4-5 year plans to the Committee. The President must try to fit the plans of the deans into the total university plan. This is often difficult as each dean considers his college the most important and, accordingly, requests allocations inconsistent with the limitations imposed by the total university budget. The deans are the only ones who submit long-range plans. Since the library is part of the Division of Business Affairs, it does not submit plans. We examined the deans' plans to find whether they included plans for the library. Plans of the Graduate School of Industrial Administration, College of Humanities and Social Sciences and College of Fine Arts deans did not mention the library. The Physics department has a paragraph on library problems. Biological Science, Chemistry, and Computer Science have a sentence citing the library as a problem but including no recommendations for improvement. Clearly, the library is not considered when the deans do their planning.

"The Council of each college consists of the officers of its faculty, the Heads of its Department, and the Associate and Assistant Deans of the college. The Dean of the college acts as Chairman of each Council. Other members, who sit on one or more of the Councils, include the Dean, Division of Student Affairs, the President of the University, the Vice President for Academic Affairs and members of the Library staff, in addition to other appropriate members."[2] College Council meetings deal occasionally with planning. In the past librarians were invited to attend, but this custom seems to have fallen into disuse except for the Mellon Institute Library Committee of which the librarian is a member. Occasionally the Engineering and Science librarian is invited to attend the Carnegie-Institute of Technology College Council meeting. For instance, she and the Director were asked to attend and to communicate plans for converting periodicals to microfilm. Librarians need to be kept informed of changes in university departments so that they can adjust their plans accordingly.

The libraries are not the only units of the university that feel insufficiently involved in planning for their own future. The faculty appears to have a minimal role in planning. Changes can be made by each academic department head and

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2. Carnegie-Mellon University. Faculty handbook. Section C2, p. 1.

the President without the knowledge of the faculty of the department. Recently the Music Education option was discontinued. The majority of the music faculty maintain that they were not consulted.

Long-range plans for the libraries were made by the administration in 1975. A Division of Information Services was formed, directed by a Vice Provost to be in charge of the Libraries and the Computation Center. The purpose of this reorganization was "to unify and enhance the information-related activities of the University...The entire information service area is in a period of innovation and change. Carnegie-Mellon has the background and areas of strength to allow it to become a leader in this field."[3]

Occasionally plans for the Libraries are made by the University administration without consultation with library faculty. The decision to move the Libraries from the Division of Academic Affairs to the Division of Business Affairs was made without the librarians being aware that such a reorganization was pending. When a similar reorganization was proposed in 1972 by the Planning Council of the Faculty Senate the librarians stated that they "felt that the library and other academic units of the University were so closely intertwined that to dissociate one from the other would be a disservice to both."[4] The library was informed in 1977 of the decision to allow the students of Winchester-Thurston, a private girls' secondary school, to use its facilities. Liararians felt that they should have had the chance to establish guidelines for the use.

There have been various extra-library committees involved in library planning. The Long Range Library Planning Committee was formed in 1967 to "formulate recommendations for the future expansion of library collections and facilities."[5] The Committee was made up of seven faculty members and the library director. The Committee recommended that "at least two subject bibliographers are needed," that "although reclassification is costly, every effort should be made to implement a uniform university-wide classification without delay," and that "the committee recommend a leisure reading room at a convenient spot on campus."[6] None of these recommendations has been i plemented.

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3. Carnegie-Mellon University, Office of the President. Organization announcement No. 288. Appointment of Vice Provost for Information Services, Sept.24, 1975.

4. Memo to Dean Richard Cyert from R.R.Corrigan, Faculty Senator, Feb.4, 1972.

5. "Long Range Library Planning Committee. Guidelines for the next ten years." Carnegie-Mellon University, May 24, 1968, p.1.

6. Ibid. p. 24-25.

A second committee was established in 1974 consisting of six teaching faculty members and two library faculty members. It was charged with "examining the library as it is now and especially as it ought to be in the future."[7] The Committee recommended "immediate implementation of a local courier system connecting the three branches of our University Libraries (Hunt Library, Engineering and Science Library and Mellon Institute), Carnegie Library of Pittsburgh, and the relevant branches of the University of Pittsburgh Libraries. It also recommended that "an additional $10,000 per year be budgeted from University funds for faculty access to research materials which cannot be provided in Pittsburgh."[8] As of March, 1978 the recommendations have not been implemented.

In 1977 a library committee was reactivated in a new form as the University Library Committee. It has fourteen members, two student representatives, eight faculty, one librarian, and ex officio, the Director of Libraries, the Vice Provost of Information Services and the Vice President for Business Affairs. Although not specifically a planning committee, it has been helpful in temporarily solving the space problem in the Engineering and Science Library by freeing an unused hallway. Its report, not yet released, Library Resources at Carnegie-Mellon and other Universities: a comparative investigation, is an extensive and very valuable study of our library budget in relation to those of libraries of similar institutions. Referring to university allocation for library service the report states: "There is good evidence that a higher level of investment in the library would be repaid by a significant increase in the quality of the university's educational and research programs. In this matter, parsimony does not seem to have served the university's best interests."[9] It is hoped that this report will alert the university community to the problems of the libraries.

The Mellon Institute Library Committee, which had been dormant, was reactivated in 1977 to deal with a specific problem, whether or not to continue to subscribe to Beilstein's Handbuch der organischen Chemie. Having decided to resubscribe, the Committee is quiescent again. It has had no meetings since February 1977.

The Carnegie-Mellon University Report to the Middle States Association in 1976 includes some descriptive material on the Libraries without offering future

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7. Library Planning Committee, Report 1974, p. 1

8. Ibid. p. 32

9. Library resources at Carnegie-Mellon and other universities: a comparative investigation, by Judith R. Lave and David W. Miller. Oct. 1977 p.22-23.

plans for them. It should be noted, however, that the Libraries and the Computation Center are the only two support services mentioned in the report. The evaluation prepared by Middle States focused heavily on the Libraries. The report gave high praise to the library staff but pointed out that it was working with insufficient funds. "In the judgment of the team, the most serious problem facing Carnegie-Mellon University is its library. The team felt that...the university had already opted for the 'non-traditional' library model, automated, non-print oriented[10]...If one looks at the amount of financial support that the library has received over the past two years, it is evident that the library is falling behind at an almost geometric rate."[11]

Planning within the Library

There are no formal planning mechanisms within the Libraries. The Director meets weekly with the Vice Provost of Information Services who, in turn, transmits plans and problems to the Vice President for Business Affairs. Occasionally, planning for specific projects is done at the monthly professional staff meetings and at the library department head meetings. For example, planning on how to deal with the new copyright law has been brought up at several of these meetings. Long range planning is not included.

If an individual librarian has a suggestion, he or she goes to the Director. The Director feels that it is her job to discuss the problem and to examine possible alternative solutions. An example of this was the suggestion that a computer search terminal be installed. The Director welcomes suggestions but does not actively solicit them. There is no formal mechanism for submitting new ideas.

Recently ad hoc committees have been formed to plan for specific projects. The general feeling is that these have been quite successful. When the Computer Science Department requested a separate area in 1976, all interested parties got together and worked out a solution acceptable to all, namely the Computer Science Browsing Room. In 1977, a Microform Committee was formed to study whether microforms should be located in a central location or interfiled with other materials, how they should be cataloged, whether or not they should be circulated, and what the effect of increased use of microforms on staffing would be.(*) The Committee report was discussed at the January 1978 professional staff meeting.

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10. Report to the Faculty, Administration, Trustees, Students of Carnegie-Mellon University, by an Evaluation Team representing the Commission on Higher Education of the Middle States Association. Nov. 1976, p. 18.

11. Ibid. p.19.

(*) See Appendix E.

A large proportion of the library staff has been involved in the Academic Library Development Program. Although this is the only task force specifically dealing with planning, each of the other task forces plans in its own area. For instance, the purpose of the fourth task force is to "describe technological and facility needs and opportunities and establish priorities for action." The ALDP has had some influence on planning already. The staff feels more involved. There is a feeling that everyone's opinion is of value. A more concrete example of the influence of the ALDP is the new Agenda Committee with a representative from each of the three libraries which solicits suggestions for agenda items prior to the monthly professional staff meeting and circulates an agenda at least a week before meetings. This means that the librarians can come to the meetings prepared with comments and criticisms.

Although planning should be done in any environment, as noted above, it is easier to focus on when new money is available. The University has allocated a $100,000 supplement to the library budget over the two year period 1977-78 and 1978-79. The University Library Committee is one of the groups advising the Library Director on how to spend these funds. Some of the items proposed have been submitted by librarians.

The most recent and the most exciting incentive for improvement of library planning is the three-year grant of $210,000 from the Andrew W. Mellon Foundation for "innovative ways of utilizing new technologies."[12] Significantly, it was only at a late date that librarians were apprised of the possibility of getting this grant. The Engineering and Science Librarian will serve as the project director. This appointment was welcomed by the library staff as there was some concern that the planning for the grant would be done outside the Libraries.

Evaluation of Planning

One source of strength for the libraries is the interest of dedicated faculty members who serve on long-range library planning committees. The recommendations of these committees in 1968 and 1972 were not carried out. The University administration planned for new directions in the libraries by its reorganization of the reporting structure in 1975, which resulted in the libraries becoming part of the Division of Information Services. At that time

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12. A Library Information Service Proposal to the Andrew W. Mellon Foundation, p. 1.

President Cyert said he looked forward to the greater use of computers in library activities. More effort has been expended in seeking funds from outside sources.

The strength in program planning within the libraries lies in the pool of innovative ideas which come from all levels from the Director down. The ideas unfortunately are not integrated into a long-range plan. One reason for this lack of coordination is that the reduced library budget has forced the Director to concentrate efforts on maintaining current levels of service. Innovative long-range plans are mandatory particularly if we are to do more with less.

A major weakness in program planning is the lack of a specific goals statement as a framework within which planning can take place. A very general statement of goals was written by the Director in August, 1977.(*) The Task Force regards this as too general to be the basis of a comprehensive library plan.

A second weakness is the lack of understanding on the part of many members of the library staff as to the meaning of planning, and as to the means of presenting ideas.

Short-range planning tends to take place on an ad hoc basis: as noted above, individual librarians present ideas to the Director orally and randomly. Planning is usually very narrowly based as far as staff involvement is concerned; for example, when it was decided to evaluate periodical subscriptions in 1977, only the Director and the serials librarian were involved. Frequently, insufficient data is gathered even when there is ample time to gather data. Other solutions are not developed for comparison. An exception noted above was the 1977 microform committee. The Computer Science Browsing Room was another exception where considerable discussion did take place before final plans were drawn. A major weakness therefore is the lack of a clearly defined planning mechanism, including schedules, and a formal process for presentation of ideas. There is a lack of meetings, such as brainstorming sessions, for the exchange of ideas because time is not generally available for planning. The literature demonstrates predisposition to ad hoc and unilateral decision-making when decisions must be made under duress and in response to time constraints.[13]

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13. Kaplan, Louis. On decision sharing in libraries: how much do we know? College & Research Libraries, v. 38, January 1977.

(*) See Appendix F.

RECOMMENDATIONS

Planning for the University Libraries, principally financial, exists between the Library Director, the Vice Provost of Information Services and the Vice President for Business Affairs. However, within the library and below the Director level, there is no formal planning structure or procedures. Therefore, it is the recommendation of this Task Force that a Long Range Library Planning Group, a standing committee, of seven members be appointed by the Director from a list of submitted recommendations and volunteers. The length of service shall be for two years; however, the initial appointments to be made to insure continuity shall be three members for two years, three members for one year; the Director of University Libraries being a member ex officio. The chairperson of the Committee shall be a professional librarian.

It will be the function of this Group to develop formal procedures for proposal, evaluation, approval and review of plans that affect overall procedures and operations within the libraries, which plans shall be consistent with Library and University goals and objectives. Examples of areas which would be of interest to the Group are space, storage, and weeding. The Group could develop plans for presentation to the University Long Range Planning Committee.

A technique that the Long Range Library Planning Group could use in variously constituted sessions is idea exchanges. Scheduled sessions could be set up for this operation possibly some evening or over a weekend. Written reports would be submitted to the Group for review and evaluation, recommendations, and disposition. Ideas and suggestions may also be submitted by the departments.

The Director should advise the Group of critical annual deadlines in order that the staff might prepare suitable contributions for use or inclusion. The Director participates in an August planning meeting of Business Affairs department heads; thus it would be appropriate to conduct a brainstorming session in May to allow time to prepare written contributions.

Individuals with suggestions for improvement of operations, new technology applications and ideas to be considered should present written information to the department head or the chairperson of the formal Planning Group depending on how far-reaching and expensive the proposed operation might be and how large an area of the Libraries would be involved.

In order to keep informed of university planning, a librarian should be a member or be encouraged to attend meetings of the Long Range Planning Committee. It would be especially valuable to attend when the Deans present their long-range plans.

The Director of University Libraries with the assistance of interested librarians should draw up a goals statement specific enough to be the basis of all library planning.

Courses should be offered to interested staff. This would be helpful in improving management skills, particularly in the planning area.

POLICY

The subgroup on policy met to decide how we should approach this subject and decided that personnel policy would affect the majority of the library staff. We formulated the following questions to be presented in interviews with some of the professional and support staff.

How do you perceive that library policies are made?

How do you interpret library policy toward doctor's appointments? Is it charged against sick leave or do you make it up? Is fixing eyeglasses charged against sick leave?

What is the library policy toward coffee breaks, does this conform to university policy?

Do all of your department take one hour for lunch and within what time period can lunch be taken?

Does support staff have to make up time taken for taking a course, do professionals?

If late because of bad weather, does total time missed have to be made up?

Are staff members allowed to smoke, eat or drink beverages at their desks?

If a person goes home sick is this time charged against sick leave?

Do you feel all department heads implement policies relating to personnel equally as handed down by the director of the library?

We interviewed all department heads, three librarians, five support staff, the Director of University Libraries, the Director, Administrative Services,

and the Vice President for Business Affairs. We were careful to select professional and support staff from each department so that all departments would be represented.

In addition to the above questions, the Director of University Libraries was asked about reference policies, gift policies, and book selection policies.

The Director, Administrative Services discussed the mechanism for formulating and transmitting policies, remission of tuition, time off to take courses, vacations, sick leave, plus time, bad weather policies. He also informed us of the part Staff Council has in some policies.

The Vice President for Business Affairs talked about the part the President of the University has in making policies.

We also looked at the Staff Handbook and Faculty Handbook which is presented to each employee by the University.

We reviewed the policies which are listed in the following section under Description of Policies.

Description of Policies

"Policies form the basic framework of principles and rules to be used as reference information for decision making...they form 'a body of law' which expedites managerial decision making. Most importantly they sharply diminish the hazards of conflicting verdicts..."[14]

The subgroup assigned to pursue the origin, interpretation and implementation of the campus and the library policies arrived at the following findings after the series of interviews mentioned above.

Personnel Policies - Campus-wide

Policies are set down by the Office of the President of the University in accordance with all federal and state regulations with input from various sources such as the Personnel Office, Staff Council, Faculty Senate, the Vice President for Business Affairs and the Director of Administrative Services. Most personnel policies can be found in the Faculty and Staff Handbooks, organization Announcements, and written memos from the Vice President for Business Affairs and the Director of Administrative Services. Many policies, as set down, are implemented

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14. Maynard, H. B. Handbook of Business Administration. New York: McGraw-Hill, 1967 p. 4-3

throughout the campus "at the discretion"[15] of the department heads. The interpretation and the implementation of these policies are widely diversified and complex. Although the Short-term and Long-term Disability Policy is defined in the Handbook, deviation from the rule does occur. Policies on doctor appointments, leaving early because of illness, etc. are administered "at the discretion" of the department heads.

Library Personnel Policies

Policies as transmitted to the Director of University Libraries from the administration are handed down by her to the Library department heads. Library department heads then apply their own interpretation. This sometimes results in differences in interpretation of the policies which was apparent in the answers to questions in the interviews.

For example there were various answers to the question "How are library policies made?" Two interviewees said they were made by the University Personnel Office; one said they were made by the Director of University Libraries; three, by the University administration; and one had no idea.

The question "How do you interpret library policy toward doctor's appointments?" elicited similarly varying answers. One staff member said the time must be made up; three said they should be charged to sick leave and, surprisingly, three thought they must be both charged to sick leave and made up.

When asked if time for taking courses must be made up all giving an answer agreed that support staff must. However, one department head did not know whether professionals had to make up the time; another department head said they should make up some and another said they should make up all.

Asked about the policy on time missed because of bad weather, two department heads followed a memo from the Director stating that "In the event of bad weather an employee may elect to take a vacation day or compensatory time back. Anyone who is late is asked to take a short lunch hour and to forego the tea break,"[16] and one department head said that the time need not be repaid. Support staff all thought time should be made up. Librarians were unsure.

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15. Oscar Mayer, Director of Administrative Services, Carnegie-Mellon University.
16. Memo from R.R.Corrigan to Employees, University Libraries. March 4, 1975.

Library Operations Policies

The present policy making mechanism for policies relating to the library consists of consultations between the Vice President of Business Affairs, the Vice Provost of Information Services and the Director of University Libraries. Our present administration prefers to become involved in the decision making process and to have input in library policies. All memos that are circulated by the Director of Libraries concerning library policies are also routed to the Vice President and the Vice Provost. However, the librarians are generally aware of the needs of the faculty and students and propose policies which are then conveyed to the Director for inclusion in her meetings with the Vice President and Vice Provost. The Vice President is free to make any changes and/or suggestions and is responsible, after discussion with the Director, for any strategic policy whereas the Director of the Libraries is responsible for tactical policies.

Circulation Policy

There is an up-to-date written policy. This policy is decided by the Director of Libraries after discussion with the department heads of Readers' Service, the Engineering and Science Library, The Mellon Institute Library, and supervisors of each circulation department.

Reference Policy

There are no written, up-to-date policies governing the operation of this service.

Gift Policy

The gift policy has been informal. Almost any donation is accepted but it is made clear that only those volumes which are useful to users of the library, fit into the teaching or research needs of the university or are of general interest are added. Librarians in subject areas make the decisions on which titles to add. The donor is advised that the library cannot and will not appraise books. The acquisitions librarian writes a letter stating that a specified number of books were donated. An approximate value is given but the Internal Revenue Service may or may not accept this valuation.

Interlibrary Loan

A written policy is in existence which follows the American Library Association Policy as implemented by all libraries. This policy has been modified in light of the new Copyright Law, which became effective January 1, 1978.

Fine and Rare Book Policy

There are written policies for the Fine and Rare Book collection. The librarian in charge of this collection determines which books will be added to this collection.

Archive Policy

There is no written archive policy. Materials are acquired by donation and on occasion items are solicited through campus publications. The archives are on various university distribution lists. Materials that are strictly defined as archival are items that are produced at Carnegie-Mellon University either by individuals, or academic or administrative divisions.

Role of the University Library Committee

The University Library Committee is described in the Planning section of this report. The Director may seek the advice of the Committee when new policies are being considered. For example, the Committee helped to find ways to exert pressure on the faculty to return overdue books. This group acts only in an advisory capacity. The overall goal of the Committee is to provide appropriate faculty and student counsel and guidance for operation of the library system.

Evaluation

Policies which affect the University as a whole and thus the Libraries are usually written and updated in three formats:

1. Handbook format (Faculty Handbook, Staff Handbook). These are revised as the need arises.

2. Organization announcements from the president (Resignations, new appointments, etc.)
3. Memos from members of the University administration (Memo re emergency days, university functions.)

Within the library system there is no formal mechanism for policy formulation. There is some misunderstanding among staff members because policies appear to be administered in a manner which varies from department to department. The department heads feel that they are following the policies as handed down by the director. Any divergence occurs usually because of unconscious differences in interpretation.

Some departments within the Library system maintain procedural manuals which include policy statements, but, in some instances, these manuals are not revised periodically and are not useful as sources of information for present or new staff members. Existing manuals are not collected in one physical location. Because of the absence of up-to-date written policies, many of these exist in the minds of the department heads as related verbally by the Director. An example of this is the policy concerning time allowed for taking courses. This policy was explained at a professional staff meeting but the policy itself has never been committed to writing by the university administration. Some policies have existed traditionally and may still be in effect even though they may be contrary to stated University policy. An example of this is the policy governing coffee breaks. The University policy stated in the Staff Handbook is: "Where rest periods are allowed, they are limited to two fifteen-minute breaks per day."[17] The Libraries allow one twenty-minute period. Much of this confusion stems from the lack of written policies and the apparent question of the power on the part of the Director of Libraries to formulate policies which relate to the Libraries in particular. In very recent times, as in the Winchester-Thurston case, decisions have been made on a level above that of the Director of Libraries, which may conflict with existing library policies. The Interlibrary Loan code and the Pennsylvania Regional Library Center Code state under what conditions materials should be borrowed. Under the Interlibrary Loan code, we borrow for graduate students but not for undergraduates. Secondary school students should not be given the interlibrary loan privilege given to the Winchester-Thurston students.

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17. Carnegie-Mellon University. Staff Handbook, p. G 10; 1

POLICY RECOMMENDATIONS

Formulation of Library policies

It is recommended that within the Libraries proposed operations policies, regardless of source, be fully discussed before implementation. Staff members affected should have a chance to give opinions and suggestions. For instance, persons consulted in changes in circulation policy should include the supervisors of circulation at Hunt and Engineering and Science Libraries, the Fine Arts Librarian and the Music Librarian. Ad hoc committees similar to the recent microforms committee could be appropriate vehicles for advising the Director on policy. A committee on space utilization, for example, composed of representative staff could coordinate all related policies. In this case gift policy would be examined to see if it should be more restrictive and a weeding policy could be initiated.

We recommend that consultation with library staff members occur before operational policy decisions are made by the Director, the Vice Provost of Information Services and the Vice President for Business Affairs. This could take place at professional staff meetings or by written memo from the Director to the staff, asking for ideas. The Director shall have the responsibility of advising the staff about pending decisions.

Communication of Library Policies

Personnel

Each staff member both full and part-time should have an up-to-date copy of all university personnel policies. This could be a copy of the faculty or staff manual supplemented by pertinent memos and organization announcements. It should be the responsibility of the department heads to see that all staff members are provided a personal copy.

We recommend that policy changes be discussed, then clearly written, so that any misunderstandings on interpretation can be resolved and under what conditions exceptions could be made. If changes involve the entire staff, at least two meetings should be held so that all members can have a chance to attend one. Changes involving less than the entire staff should be discussed with parties directly affected. For instance, the copyright law was discussed among the Readers' Service staff of the various Libraries.

Operational Policies

The Task Force recommends that the original copies of all memos and organization announcements concerning policy be kept in a loose-leaf folder in the office of the Director. They should be indexed by key-word in title. Duplicate copies could be distributed to department heads. To insure that all members see the material, the department heads could list the initials of all of their staff to be checked off after reading. After circulation, department heads would retain their copy in departmental files for future reference.

We recommend that policies be written, discussed at a professional staff meeting, and then approved by the Director. Policies that need to be written include gift, archives and reference policies. Weeding policies should be formulated by a committee with representatives from all libraries.

Some departments have procedural manuals but with the exception of the Engineering and Science Library, the Music Library and the Library Office, they have not been revised since 1960. A pilot project is underway to store the Engineering and Science procedural manuals through the Text-Edit Program on a computer. This simplifies revision as changes can be inserted without rewriting or reformating the whole manual.

It is recommended that each department head appoint a staff member as the coordinator of the departmental procedural manual. The coordinator would instruct all members of the department to write a procedural description of his or her job. After approval by the department head, the description would be submitted to the coordinator for inclusion in the departmental procedural manual. As procedural changes occur they would be recorded in the manual. Every year the coordinator would check with all staff members to make sure that the manual is current.

All policy and procedural manuals should be available in the office of the Director. Each department should have a copy of its own manual.

BUDGET

Introduction

The budget subgroup of the Management Task Force was fortunate to be able to include two members of the staff who work closely in budget matters. Therefore, the subgroup interviewed its own members as well as the Director of Libraries and the Vice Provost of Information Services.

The budgetary process is not clearly understood by the staff. It is hoped that the descriptive portion of this report will be helpful to other members of the staff in understanding the overall workings of the budget.

Background reading dealt with other forms of budgeting such as program and formula budgets. It was the consensus of the group that the program budget would be useful in planning even though the format of a line budget were retained. However, there was not enough time to do more than recommend studying it further. The library purchased the SPEC Kit No.32, "Preparation and Presentation of the Library Budget", prepared by the Systems and Procedures Exchange Center, Association of Research Libraries. This would be a useful introduction for staff members to read to get an idea of alternative budget methods.

Description (See Figure I attached)

The library budget is a formalized plan for expenditure of funds allocated to the library for each fiscal year. The fiscal year runs from July through June. The Resource Allocation Board consisting of the President, the Vice Presidents and the Provosts makes a preliminary allocation for Information Services in September. The Vice President for Business Affairs notifies the Vice Provost of Information Services of the amount. The Vice Provost decides on the allocation for the Libraries. If the Director of University Libraries and the Vice Provost for Information Services are not satisfied with the allocation granted, they can appeal to the Resource Allocation Board. This was done in 1977 to increase library salaries. According to the Director, the Board has been fair so far.

From the gross amount given to the libraries, funds for capital acquisitions are deducted. Funds for operations are divided among Mellon Institute, the Audio-Visual Department and Hunt Library/Engineering and Science Library. The Hunt Library and the Engineering and Science Library budgets are administered together. The Mellon Institute and Audio-Visual budgets are separate. Audio-Visual uses a charge-back basis for production and equipment rental.

Figure 1

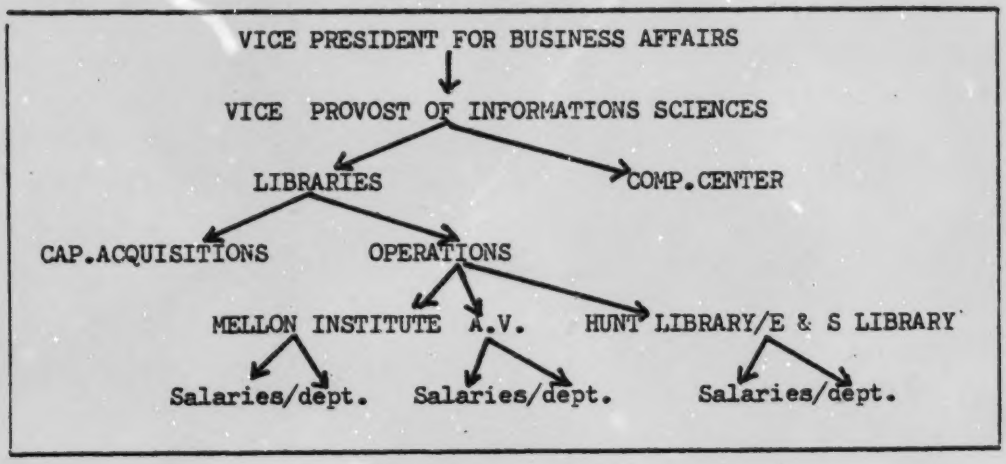
CARNEGIE-MELLON UNIVERSITY

University Libraries, Expenditures

	Salaries and Fringe	Department/ Equipment	Total of Individual Libraries	Total Library Expenditure
1971-1972				
Hunt Library	309,908	197,950	507,858	
Mellon Institute	49,363	56,600	105,963	613,821
1972-1973				
Hunt Library	333,070	207,848	540,918	
Mellon Institute	47,564	57,330	104,894	645,812
1973-1974				
Hunt Library	333,774	209,524	543,298	
Mellon Institute	41,989	66,644	108,633	651,931
1974-1975				
Hunt Library	325,362	224,022	549,384	
Mellon Institute	44,524	58,186	102,710	652,094
1975-1976				
Hunt Library	337,263	227,084	564,347	
Mellon Institute	47,363	71,672	119,035	683,382
1976-1977				
Hunt Library	367,950	240,690	608,640	
Mellon Institute	42,750	66,636	109,386	718,026

Each of the Mellon Institute, Audio-Visual Department and Hunt Library/ Engineering and Science Library budgets is then divided into the following broad categories which will be described below, salaries and departmental.

Budget Flow Chart



Salaries

University policy states that all salary increases are based on merit. If an employee is doing a barely adequate job a 3-4% increase should be given, nothing smaller. If a person is doing a superb job, a 7-8% increase is in order. All others should fall between these categories. Within the library there are not sufficient funds in the salary budget to make such distinctions. The adequate employee gets 4% and the superstar 6%.

The problem with salaries in recent years has been that the University has declared a mandatory increase in the minimum pay scale of salaries for the lower grades. Therefore, employees recently hired must be given a raise, possibly over 7%, to bring them up to their new minimums whether or not it is merited.

Students can make more money in other departments on campus. Thus we lose many of our better student workers to the departments that pay more.

The salaries of three full-time staff are paid by the federal government under the Comprehensive Employment Training Act (CETA) through the Allegheny County Department of Jobpower. This program is for "definable tasks or groups

of related tasks which will be completed within a definable period not exceeding one year, which has a public service objective, which results in a specific product or accomplishment when completed, and which would not otherwise be accomplished with existing funds."

Departmental

All money for operations not devoted to salaries is labeled "Departmental". Departmental funds for the Audio-Visual Department, Hunt Library/Engineering and Science Library, and Mellon Institute are used for everything except salaries and fringe benefits and items costing more than $500. This would include supplies, telephone charges, travel expenses, (standing orders,) books, periodicals, slides, music, bindery, postage and maintenance contracts. The Director of University Libraries decides, on the basis of last year's budget, after allowing for inflation, how much is needed for these items.

The Director of University Libraries uses a formula to determine how much of the book budget to allocate to each college. Money is not really given to the colleges. Rather, they decide on what materials the allocated amount should be spent. Items included in the formula are student enrollment, classes taught, and average cost of books in the subject area. The fiscal year starts in July. The Director notifies each dean of the amount of his allocation in October. Each dean, in turn, decides how much to allot each of the departments in his college for the purchase of books for the library. There is a lag between the time that the dean gets his allocation and when he makes the allotment by department. Usually notification has occurred sooner. For instance in the 1977-78 budget year departmental allocations were not fixed until January 1978. From July until January orders had been placed and bills charged against an unknown allocation. Each department has a library representative who decides what to buy. Some representatives do not spend their total allocations. The quality of book selection in the libraries depends to a large extent on them, although librarians do make suggestions for purchase. Bills are paid and charged to each department's allocation. After the allocations have been fixed the library assistant in the Order Department of Hunt Library notifies the library representatives of expenditures and outstanding orders monthly. However, in 1977-78 this monthly notice could not be given until after January because of the delay in setting allocations.

Because of increases in the cost of periodical subscriptions the budget for periodicals had to be increased. The Director stated in the 1975-76 Annual Report "Subscription prices for periodicals continued to spiral... Expenditures for periodicals in Hunt Library rose 11% despite the fact that we cancelled 336 and added only 72 new subscriptions."[18] The book budget was reduced because of the increases in the periodical budget. However, for the years 1977-78 and 1978-79 the book budget has been augmented by a special fund allocated to the libraries by the President of the University. This will be described further below. A review of the last year's expenditures and a survey of increases in the costs of books and periodicals helps the Director to come to a decision as to amounts to be allocated to colleges for book expenditures.

If departments have outstanding orders at the end of the year, there is a library contingency fund set up to pay for them, so that each department starts the new fiscal year with a clean slate.

Other Sources of Funds

The library has some special funds which are used for purchasing special collection books. The fine money and money received for lost books is put back into one of the special funds. From this fund library replacement books, new editions and missing issues of journals are purchased. Interest from endowment funds is used to purchase books. A fund must be at least $10,000 to be an endowment. Currently there is only one endowment, the Friends of the Library fund.

The library budget was supplemented for the two-year period 1977-78 and 1978-79 by a special $100,000 Library Acquisition Fund. In 1977-78, $27,500 and in 1978-79, $40,000 of this money was used to supplement the allocation to the colleges. Otherwise, the increase in the periodical budget mentioned above would have sadly depleted the sum available for books. New equipment for the Music Listening Room was also purchased with part of this special fund. It is the hope of the administration and the library staff that an increase in the annual library budget will obviate the need for similar special funds after 1978-79.

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18. Ruth R. Corrigan. Libraries of Carnegie-Mellon University. Annual Report 1975-76, p.3.

EVALUATION OF BUDGETARY PROCESS

The budgetary planning process at the university level, that is from President to Director of Libraries, appears strong and well organized. The procedures are clearly defined. There is a timetable which is generally followed. Two groups are involved, the Long Range Planning Committee and the Resource Allocation Board. The Resource Allocation Board of the University serves as a court of appeals in the case of budgetary problems.

The formula used by the Director to determine library allocations to colleges is useful since it quantifies allocations, thereby reducing the chances of interdepartmental bickering.

The federal work-study program picks up 80% of the cost of the approximately 550 hours per week of student assistants. The Comprehensive Employment and Training Act (CETA) pays the salary of three full-time staff members for the current year.

Salaries of the library staff are low. This is indicated by a 79% turnover rate of full-time staff in the last five years. Out of a full-time staff of 43, 34 have left. It should be noted that 30 of the 34 were under 30 years of age.

The following information on job descriptions and salary ranges at the beginning levels as of 1976-77 will show the inequities in the pay structure.[19]

Grade 2, we have three persons, who are identified as Library Clerical Assistant I @ a beginning salary of $2.58/hr. They must be able to operate an electric typewriter; must have knowledge of general office procedures and are required to maintain simple records and to follow instructions. The range for this grade is $2.58-$3.49 an hour or $5,040-$6,804 per year.

Grade 3, we have four persons, Library Clerical assistants, II @ beginning salary of $2.71/hr. They must have the ability to learn and apply knowledge of library services, organization, operations and routines; be able to interpret standard library abbreviations and terminology and foreign language materials, and be able to speak clearly and to operate an electric typewriter. The range for this grade is $2.71-$3.66 an hour or $5,280-$7,128 per year.

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19. Carnegie-Mellon University, Personnel Office. Pay Schedule effective October 1, 1976.

Grade 4, we have five persons, Library Assistants, I, @ beginning salary of $2.89/hr. They must have the ability to communicate effectively with the public; familiarity with terminology covered by specialized collections, ability to apply knowledge of regulations, procedures and instructions; knowledge of cataloging practices; knowledge of routine reference sources in library and detailed knowledge of library's filing systems. The range for this grade is $2.89-$4.05 an hour or $5,640-$7,896 per year.

Grade 7, we have eleven persons, Library Assistants II, with beginning salaries @ $3.26/hr. Substantial knowledge of library's services, functions, policies and procedures and detailed understanding of the clerical processes in a particular function to achieve the library's goals. Ability to exercise substantial discretion in allowing departure from established procedures. Ability to establish effective working relationships with the campus community and the public. Proficiency in verbal and written communication. Skill in organizing the workload. Ability to use tact in situations that demand it. Knowledge of specialized terminology and knowledge and understanding of techniques used in cataloging. The range for this grade is $3.26-$4.73 an hour or $6,360-$9,228 per year.

(Note) Grades 2-3-4-7 also require the "on the job" use of office equipment such as typewriters, adding machines, charge-out machines, and in Grade 7 operation of the OCLC terminal.

Grade 8, we have one person, Library Specialist @ a beginning salary of $3.38/hr. The position requires the ability to answer questions concerning specialized collections; ability to communicate effectively; artistic skill; neatness in disassembling books and resewing them; experience in binding books; knowledge of the library's filing system; understanding and appreciating the philosophy of library service and knowledge of calligraphy. The range for this grade is $3.38-$4.91 an hour or $6,600-$9,576 per year.

The above information reflects inequities as compared with the salaries for other positions requiring less skill. The beginning salary for salad tossers in Food Service is $4.20/hr.; for waitresses $4.00/hr. These positions are unionized.

The beginning salary of professional librarians, with a Master of Library Science degree, as of March, 1977 was $4.53/hr. Salaries of professional librarians at Carnegie-Mellon University are below both the national average and those of comparable Pittsburgh libraries. In 1977 the starting salary at Carnegie-Mellon University was $8,860. Comparative salaries are listed below:

Carnegie Library of Pittsburgh	$10,319
University of Pittsburgh	10,400
Allegheny County Community College	10,000
Average salary of Pitt Library Schools graduate	10,980
Average salary of all library school graduates	(Still waiting for figure)

In 1978-79 beginning salaries were raised to $10,000 at Carnegie-Mellon University but other institutions have increased concurrently.

University of Pittsburgh	$11,750
Allegheny County Community College	11,250
Carnegie Library of Pittsburgh	10,834

The mean salary of professional librarians at Carnegie-Mellon University in 1976-77 was $12,425. This compares with the mean salary of the following institutions:[20]

University of Pittsburgh	$15,828
MIT	15,825
Case Western Reserve	14,600

In recent years the university has been trying to improve the pay scale for non-exempt employees. Some inequities have developed as a result of this effort.

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20. Association of Res. Libraries, Washington, D.C. Annual Salary Survey, 1976-1977.

Increases in the total salary budget are consumed in implementing mandatory raises to bring employees to the minimum of the salary range for their grade. Therefore, funds are not available to provide merit raises for those of the staff who deserve them. The minimum salaries for each grade which have increased each year for the past five years continue to affect adversely those employees who have been here the longest. In order to bring employees up to their minimum raises are sometimes made regardless of merit; i.e. a person who is hired in Grade 5 in May of this year at a minimum salary of $6,120, will automatically have to be brought up to $6,464 in July just to attain the minimum. This represents a 5.6% increase in two months. The same would be applicable to any grade. So, in keeping pace with the minimum increases a large amount of the salary budget must be used, thus leaving a depleted amount for additional salary increases for long-term employees. This makes it difficult for them to be far out of their minimums: No employee has reached the maximum for her grade despite the fact that some have been here for as long as 24 years.

Employee A with 14 years service has only attained the first quartile of the grade range.

Employee B, hired in 1955, is only at midpoint of her range.

The Director has the option to go to the Resource Allocation Board for additional funds and did so with positive results in 1977. This enabled her to give larger increases than would have been possible otherwise. The increase in minimum salary is good; we have nothing against this because of the high cost of living but the employees who have served the university well for over five years are finding it almost impossible to advance toward that point in the salary range to which their abilities and years of service would seem to entitle them. The President suggests a 4-6% increase depending on merit. However, the Director is forced to give 5.4 to 9.8% increases in order to bring people to their minimum which limits the pool of available resources for other employees. This also affects the increments of the professional people whose salary ranges are not included in the non-exempt pay schedule.

Members of the library staff have been unaware of exactly how the budget operates. The formula for determining allocation is not generally known and the problems of salary adjustment described above have not been explained. The Academic Library Development Program has helped acquaint Task Force members with budgetary operations.

Librarians have not had input into budgetary decisions which means that a broader source of ideas is not being tapped. To our knowledge there has been no examination of alternative ways of spending a constant or reduced budget. Department heads are not consulted about raises for their staff. Until recently merit rating forms prepared by department heads have not been used as a basis of computing raises. In contrast, the System and Procedures Exchange Center of the Association of Research Libraries found in a survey of 68 member libraries that:

> "Fifty-one (75%) respondents utilize an administrative council, the department heads, or a representative committee in a consultative capacity."[21]

The line budget required by the university is not supplemented by a program budget. The Association of Research Libraries "SPEC Kit" states that:

> "Most ARL libraries use more than one budget format. Frequently, a line-item budget is presented to the university administration but programmatic budget...is used internally."[22]

Program approaches to budgeting would help to determine costs and outputs in deciding alternative programs.

Faculty representatives are often not familiar with library acquisitions procedures. They do not know how much they have to spend. They must spend their allocations before the end of the fiscal year to avoid losing them. Sometimes when the end of the year approaches with large percentages of the allocations not spent, materials are ordered without sufficient thought or study. The quality of the book selection process is dependent on the library representatives who in at least two cases are staff members.

BUDGET RECOMMENDATIONS

The Task Force recommends:

- That the Director of University Libraries be given some indication when she receives the first guidelines for budget proposals that the minimum salaries will be taking another rise. With that knowledge she could then allocate more monies to the salary line

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21. Systems & Procedures Exchange Center, Office of University Library Management Studies, Association of Research Libraries. Preparation and presentation of the library budget (SPEC Kit No.32). Washington, D.C. April 1977. Spec flyer, p. 1.

22. Ibid p. 1.

to compensate for those employees who will not be affected by the minimum raise increases.

- That librarians be given the opportunity to participate in budget planning through a Budget Committee. A program approach such as that used at Princeton University Library would provide means to evaluate alternate division of funds available.[23]
- That the Director work closely throughout the year with our Personnel Department to pursue the availability of more CETA employees to supplement our understaffed library and at the same time increase our allotted salary line.
- That the University administration provide an extra-budgetary fund which could be drawn on if increases in maintenance, services, supplies or library materials occur after the proposed budget has been approved.
- That the allocations to the departments be made as soon as possible.
- That the library representative, the department head or anyone who is designated to do the ordering for their college departments should meet in the fall with our acquisitions librarian or librarian who would acquaint them with the procedure of ordering, apprise them of what they have to spend (if the department head has not already done so) and instruct them in the use of the order forms.
- That the Director appoint two staff members to work with her and the Development Office in preparing proposals to foundations and/or individuals to raise funds in the library.
- That the salaries of the staff be increased to reflect the libraries' importance in an institution with avowed goals of excellence in teaching and research. To do this we suggest the following:

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23. Ibid. Support data. Princeton. 15 pp.

- That support employees hired before 1972 be given a one-time increase to raise them by at least one complete quartile above their present position on the pay schedule.
- That the Budget Committee review the salary schedules of professional librarians to compare with salaries for similar professional-faculty positions on campus and with salaries of professional librarians at other institutions.

COMMUNICATIONS

Strategy of the Study

To study Management Information Systems, the Task Force decided that communications would best suit this purpose. After much discussion it was decided that the following questions would be asked of three of the professional staff and thirteen of the support staff.

Do you think communications are adequate?

If not, why?

Problems with the mail?

Not written down?

Not communicated by the department head?

How to improve communications

By a bulletin board? Are the bulletin boards we now have useful?

By a newsletter?

By memos?

By meetings?

Type of meeting preferred and their frequency?

Combined meetings of professional and non-professional staff?

Support staff meetings?

Interest area meetings?

Another question the Task Force considered was whether or not the university is sufficiently informed about the library. Would the administration be better

informed if the Vice President for Business Affairs and/or the Vice Provost of Information Services attended more of the professional staff meetings?

Other means of communications that the Task Force studied included the annual reports of departments such as Technical Processes and the Engineering and Science Library, which are sent to the Director of the Library, the annual report of the Director sent to the President of the University with copies to the Vice President for Business Affairs and the Vice Provost of Information Services.

DESCRIPTION OF CURRENT STATE

Communication Between Library and Community

Librarians are members and officers of numerous professional organizations such as the American Library Association, the Pennsylvania Library Association, the Special Libraries Association, the Association for College and Research Libraries, and the American Society for Information Science. Information on current trends in the library profession is gathered by attending meetings, reading journals and personal contacts with other librarians.

The library is a member of the Pennsylvania Regional Library Center (PRLC), a group of 43 area libraries formed in 1967 to explore means of cooperation. For instance, PRLC publishes a Newspaper List, 1976, and the Pittsburgh Regional Union List of Periodicals. It maintains a file of expensive items (over $200) purchased by cooperating libraries. PRLC serves as intermediary between the Ohio College Library Center, a cooperative computer based cataloging group, and its member libraries. In 1977 the Director of University Libraries at Carnegie-Mellon University was the chairperson of PRLC.

Communication Between the Libraries and University Administration

Upward Communication

The Director of University Libraries reports to the Vice Provost of Information Services who, in turn, reports to the Vice President for Business Affairs. Prior to 1975, the director reported to the Vice President for Academic Affairs, an arrangement used at the majority of academic institutions. The structure was reorganized in 1975. In 1972, when plans for reorganization were proposed the library faculty stated:

> "The library is effectively removed from any direct communication with those who have the greatest stake in its development."[24]

The Director of University Libraries is the sole channel for communication for decision-making to the Vice Provost of Information Services and the Vice President for Business Affairs. In rare instances the Vice Provost of Information Services attends a professional staff meeting.

Downward Communication

The University administration communicates decisions to the libraries by means of Organization Announcements from the President or memos from other members of the administration. These announcements may be sent to all staff, or to department heads, or to professional staff. For example, memos are sent from the Vice President for Business Affairs to all staff or only to department heads.

The Annual Report of the President is a prime source for the library staff to learn of plans, programs and activities of the university, but this report is not routed to the staff.

The Annual Report of the Director of University Libraries containing statistical data, highlights of the year's events, future plans for the libraries and resumes of professional activities of the librarians is routed to the professional staff.

Since November 1977, the Vice President for Business Affairs requested and received monthly "Activity Reports" from the libraries. The statistical reports are concerned with circulation, interlibrary loans, reference questions, bibliographical searches via computer and technical processing activities.

Preparation of the budget requires the Director to file preliminary financial forms in the fall and more detailed forms in the spring.

Communication between the librarians and members of the University administration occurs primarily at two weekly meetings, one between the Director and the Vice Provost of Information Services, and the other between the Vice Provost of Information Services and the Vice President for Business Affairs.

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24. Inter-office memo to Dean Cyert and the members of the Planning Council from the members of the Library Faculty of the C-MU Libraries. Jan. 31, 1972, p. 2.

Communication Between the Library and Other Groups in the University Community.

The University Library Committee described in preceding sections of this report advises the Director on library matters. The Director of Libraries and a librarian appointed by the Vice President for Business Affairs serve on the Committee. An agenda is circulated before meetings. Although there are no minutes, a list of subjects discussed at the meetings is circulated to professional librarians. Committee reports are not circulated to the library staff but they are available for perusal in the Director's office. The Committee on rare occasions, seeks input from librarians. For example, the committee asked for information on periodical use to evaluate renewal of subscriptions.

Library representatives from each academic department are responsible for book selection. However, librarians do suggest materials for purchase after consulting basic bibliographic tools. (See description in the Library Services and Collections Task Force report.)

There is little communication with the faculty through attendance by librarians at meetings of the College Councils, as mentioned in the planning part of this report. Therefore, librarians do not feel informed about changes that might affect collection development policies.

The library has two representatives on the Faculty Senate and its subcommittees. Minutes of meetings are sent to professional librarians. Focus, the faculty and staff newspaper, and The Tartan, the student newspaper, report on subjects discussed of interest to their constituents.

The Personnel Office conducts an orientation program for new employees to acquaint them with the university and to explain benefit programs.

Currently discussions are underway to improve communication between the libraries and users by means of signs. A Committee on Signs has been formed to study the problem. Floor plans for the Reference Room in Hunt Library are completed and plans for the rest of Hunt Library and the Engineering and Science Library are in process.

Informal communications of a public relations nature include three recent articles, two in Focus, one on the Engineering and Science Librarians, the other on bibliographic searching by computer, and one in the Tartan, on the Audio-Visual Department. A pamphlet issued in February 1978, describes computer-generated

bibliographies available in the Libraries. A short article on the Libraries is included in Release, a publication from the office of the Dean of Students describing library services and activities available in the local area. Articles in the Pittsburgh newspapers report on exhibitions in the Fine and Rare Book Rooms. At the most informal level communication takes place at faculty and staff social functions such as the Wednesday night Faculty Social Hour, the President's Dinner, to which professional librarians and the Administrative Assistant are invited, and the Christmas Party given by the Division of Business Affairs, which all can attend.

Communication Within the Libraries

At monthly meetings of the professional staff, announcements and reports of meetings are made. Recently these meetings have been developing into a forum for discussion. Since the Idea Exchange of the ALDP brought up difficulties in communication, two improvements have been made. Minutes are taken and circulated to all staff, and the Agenda Committee mentioned above, has been appointed.

Other meetings are held in the Library. The department heads meet monthly with the director for discussion of administrative matters such as snow days, library hours and copyright problems. There are rare meetings of the whole staff always to discuss a particular subject such as holiday schedules. The Staff Association meets about three times a year for purely social reasons and for reporting on activities. The frequency of departmental meetings within the library varies. The staff of the Engineering and Science Library holds weekly meetings to discuss proposals and problems. The Readers' Services Department of Hunt Library instituted weekly meetings in 1977. These are concerned with announcements and discussion of problems. The Technical Processes Department meets about three times a year. The Fine Arts department does not hold meetings.

Occasionally, representatives from various departments confer on common problems. For instance, a committee of librarians studied and reported on fringe benefits for librarians. More recently, there have been meetings to set up procedures for complying with the new copyright law and to familiarize staff and librarians with pertinent sections of the law.

There is limited written communication within the library. Each department head prepares an annual report for the Director, giving statistics, summarizing the year's activities, and giving plans for the next year. Many librarians questioned informally say they have not seen reports from departments other than their own. The Director sends memos to the department heads for circulation to all staff. Subjects include a description of the policy on snow days, recent appointments and promotions, and work schedules. Sometimes, in the press of business, these memos are forgotten as was the case in the appointment in January 1978 of a new person in the slide room.

Since May 1977, the ALDP bi-monthly newsletter has kept the staff informed on the progress of the study. Some information is posted on bulletin boards in all three libraries. Since the fall of 1977 an attempt has been made to post jobs open within the library. All campus job openings are posted immediately.

Informal communication within the libraries has included the introduction of new employees to fellow workers but there is no formal mechanism for them to learn about the overall functioning of the libraries. This is sometimes embarrassing when staff members cannot answer simple questions from students or faculty members. For instance, a professional librarian who had been here many months was asked where the Music Department was. The librarian, who worked at the Engineering and Science Library, did not know that there was a library music department.

Communication at coffee breaks and at lunch is a major source of information and misinformation. Because of the dearth of written material, staff is overly dependent on the grapevine.

EVALUATION OF COMMUNICATION

The University Personnel Office conducts orientation programs for new full-time personnel and explains in detail all benefit plans.

The University Libraries Advisory Committee provides advice and support of library programs. With the support of this committee the faculty was encouraged to return library material.

The circulation of minutes of professional staff meetings and a list of topics discussed at department head meetings enables the entire staff to be aware of areas of concern and subjects under consideration and discussion.

A master calendar is posted in Technical Processes for librarians to record professional meetings they plan to attend.

Departmental meetings, in the Reference Department and in the Engineering and Science Library, give staff an opportunity for upward communication.

The interest, dedication, and goodwill the majority of the staff bears for the Libraries and the service it provides to the campus and the larger community, is a major strength in the communication links of the Libraries with their constituencies.

Systematic use of memoranda and written communications designed to keep the entire staff informed and currently aware of policies and/or procedures regarding library operations, particularly personnel aspects of the operations, is not observed by the present library administration. Sometimes a single memo is sent to be circulated to the entire library staff, and it takes a long time before it reaches the last person.

Procedural manuals for some department operations are lacking or completely outdated.

There are no regular organized channels for communication between departments; i.e., projects in operation unique to that department but potentially beneficial to all departments, if aware of them, channels for easy upward communications and the reverse, channels for staff planning suggestions, channels for communicating cancellation or ordering of periodicals or serials.

The Annual Report of the Director does not reflect activities of the departments generally. There are interesting projects planned or in operation which would be of interest to the university administration.

There is no formal orientation program for new library personnel. Such a deficiency relies on the employees' own curiosity, interest, and day-to-day job activities to familiarize themselves with the libraries and in the end leaves them in ignorance of many of the library services. This is discussed with appropriate recommendations in the Human Resources Task Force.

Hunt Institute operations are of interest to Hunt Library Staff. The staff of the Circulation Desk at Hunt Library are the first library personnel an individual generally meets on entering the building, so it is necessary that the staff be aware of changes, meetings, and programs, since directions are often requested of the staff.

RECOMMENDATIONS FOR COMMUNICATIONS

Communications Between the Libraries and the University:

At this time, certain librarians do participate on committees and at meetings which involve other members of the University community, such as the University Libraries Advisory Committee, the Faculty Senate, and, upon invitation, the College Council of the Carnegie Institute of Technology. Librarians who are not serving on these committees feel that they are not sufficiently informed about the business conducted at the meetings. It is recommended that the librarians who serve on these committees and sit in on these meetings submit a report of discussions held to the Director as well as to the rest of the professional staff. Also this Task Force recommends that the Director inform the professional staff of items of interest which may arise in discussions of meetings with the Vice President for Business Affairs. University publications such as the Annual Report of the President should be circulated to all staff.

In addition to attendance at the meetings discussed in the preceding paragraph, all librarians should make a positive effort to participate in University activities in order to become more visible to the University community. The Wednesday night social hour is an excellent informal occasion for meeting faculty and such functions as the President's Dinner and University sponsored plays and operas provide an excellent opportunity for Library staff to meet other members of the University community.

Communication with the University community, students in particular, can be further enhanced by providing information on services offered by the Libraries. In this respect, this Task Force recommends the appointment by the Director of a three member Public Relations Committee whose charge will be to coordinate the dissemination of information concerning the Libraries to the University community. The committee will be a standing committee with members serving initially a two year term, then two members being replaced in each successive year. The Committee will include at least one librarian and at least one support staff member. One of the first duties of the Committee will be to publish an up-to-date library handbook including such important information as library services and hours. There used to be such a handbook but it was eliminated because of cost. Along this same line, other projects undertaken by the Committee could include distributing information on the use of specific

library materials such as reference tools, special collections, audio-visual services, and interlibrary loan.

It will also be the responsibility of this Committee to serve as the liaison between the Library staff and the editors of Focus and The Tartan. The Committee will periodically solicit news items from the staff, such as publications or meetings attended or new appointments, for inclusion in these publications.

Communications Within the Libraries:

In order to assure the proper dissemination of written information within the library system, the Task Force recommends the following: Based upon the system recently instituted by the Head of Readers' Services, one person in each department will be selected to number each written communication and verify that each member of the department has read the information. All communications will then be collected and retained in a file designated for that purpose.

Professional magazines are circulated within the library. Sometimes they get stalled for long periods because the next person on the list is too busy to read them. It is recommended that if someone holds an item up too long, he or she be moved to the bottom of the list.

In the present situation, communication among the Library departments is very informal. With this in mind, the Task Force recommends that the department heads circulate their annual reports among the Library staff for information purposes, since the Annual Report of the Director includes only selected information from these reports.

Librarians who attend meetings of professional organizations should report on them.

At the present time, some departments in the library hold meetings of all members of the department on a regular basis. This is a commendable effort which has resulted in better communication within departments as well as providing a forum for staff members to discuss any problems with the entire department. It is the recommendation of the Task Force that all departments in the Libraries arrange to schedule meetings of the entire department on a regular basis. The departments which currently hold meetings do so on a weekly basis.

All job openings which originate within the Library system should be clearly

posted on bulletin boards in all libraries and copies should be sent to all department heads for distribution within the departments.

After the work of the Academic Library Development Program is finished, the Task Force recommends that a newsletter be instituted, to appear on a regular basis of at least six times a year and that it be distributed to each staff member. The newsletter will contain news from each department in the Library system and the news will be of an administrative as well as personal nature. One person from each department will be the reporter for the department and will be responsible for gathering the news and submitting it to the editors of the newsletter. The Communications Committee of the present Staff Association will be the editors since the present function of this committee is not clearly defined.

Also after the Academic Library Development Program, it is recommended that the monthly professional and department head meetings be held more frequently to provide more time for improved communication.

Finally, it is recommended that all staff members make a conscious effort to improve communication by conveying information formally and informally to others. It is not just downward communication that is lacking but upward and lateral as well.

Marilyn M. Albright
Ruth L. Callen
Frances C. Hardie, Chairman
Ann M. De Klerk
Earl L. Mounts
Sara O. Rosemeyer
Violet O. Wilson

MANAGEMENT TASK FORCE

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HUMAN RESOURCES TASK FORCE

Charge:

The Task Force should help the study team by investigating the way in which the library staff is secured, organized, motivated and directed. With the manual as a guide, focus your attention mainly on those issues identified by the study team as being of major importance in staffing policies.

Library Organization:

Study the organizational structure of the library as well as the philosophical orientation of its leadership. Is there too firm a line between professional and supportive staff? Consider a realignment of duties that would offer relief to professionals and at the same time improve opportunities for other staff members.

Supervisory and Leadership Practices:

Study the functions of library supervisors in order to gain some perception of supervisory/leadership styles. Examine policies and practices regarding selection, training and promotion of personnel. Is library personnel sufficiently involved in the decision-making process?

Staff Development:

Examine methods for staff development, either library or institutional. Determine whether there is any program to encourage staff in the pursuit of learning for advancement in his/her field or to develop their skills.

Personnel Practices:

Does administration tie staff needs to the central issues of personal rewards, job satisfaction and development? Are part-time employees gaining due recognition for their contribution to the Library/University attainment of goals and objectives?

INTRODUCTION

Human resources constitute the foundation of a library. The ideal selection and use of human resources will provide for increased productivity by providing job motivation, a better work environment, opportunities for growth, and personal rewards. Dissatisfaction of the staff at any level will diminish services proportionately. Strained supervisory-support staff relationships create considerable tension and lower staff morale.

Organizational change at any level must be regarded with respect to the impact it will have on any other functions of the staff as well as on the group as a whole.

With these ideas in mind the Human Resources Task Force has undertaken to answer the charges mandated by the Academic Library Development Program Study Team.

Research Method

To gain background information, the Task Force read and discussed several of the references that were included in the Academic Library Development Program Bibliography. They studied the faculty and personnel handbooks and interviewed members of the University personnel staff.

The Task Force prepared to locate problem areas or situations that might require a questionnaire-type survey. It consisted of 27 questions requiring multiple choice answers which covered problems of morale, supervisory practices and working conditions. Space was left after each question for comments. Copies of the questionnaire were distributed to the entire staff of 55. The cover page (see Appendix J.) stated that the data would be kept in strict confidence and asked the readers to check whether they were library faculty or support staff, whether they had worked in the library under five years or five years or more and the unit in which they work. A chart was prepared tabulating the answers to these questions. (See Appendix K).

One hundred percent of the questionnaires were returned, but four withheld any of the information requested on the cover page. Many questions were not answered. In question No. 1a for example, eight people did not circle any number, for 1b there were nine who did not answer and ten gave no answer for 1c. Questions No. 5 and No. 12 were the only two that were answered by all 55 of the staff. In questions 18, 25 and 26 a number 5 answer was included for "Question does not apply" and still one person did not circle any answer for question 18, four people did not for question 25 and one person for question 26.

After tabulation of the answers on the questionnaires a set of interview questions was prepared that covered the issues deemed to be most pertinent from the questionnaire answers and comments. (See Appendix L). Many times the comments made on the questionnaires revealed much more than the answer circled.

Based on data from these sources and a wide range of experience and expertise, the Task Force was able to make recommendations for improvement of human resources management in the University Libraries.

ORGANIZATION

Description

In describing the organization of the library and its place in the structure of the University, it is first necessary to study the university organization

chart. (See Appendix G).

The most recent organizational chart of the University Libraries was prepared June 1, 1976. (See Appendix H). The Director of the University Libraries reports directly to the Vice Provost of Information Services. Shown reporting directly to the Director are the Faculty Committee, the Student Committee, the Hunt Library Visiting Committee, the Associate Librarian and the Fine and Rare Books Librarian. Shown reporting to the Associate Librarian are Teaching Aids and Instructional T.V., Public Services, departmental libraries, and Technical Processes. Public Services include Circulation and General Reference. Reserve Book Room is listed under Circulation. General Reference includes Government Documents, interlibrary loan, photocopy service and service to the College of Humanities and Social Science. The departmental libraries are shown to be Fine Arts Library, Engineering and Science Library and Mellon Institute Library. Technical Processes include acquisitions and cataloging.

Of the 55 employees comprising the library staff in January, 1978, 12 are part-time, of whom three are librarians. All departments rely heavily upon student help for many of their tasks.

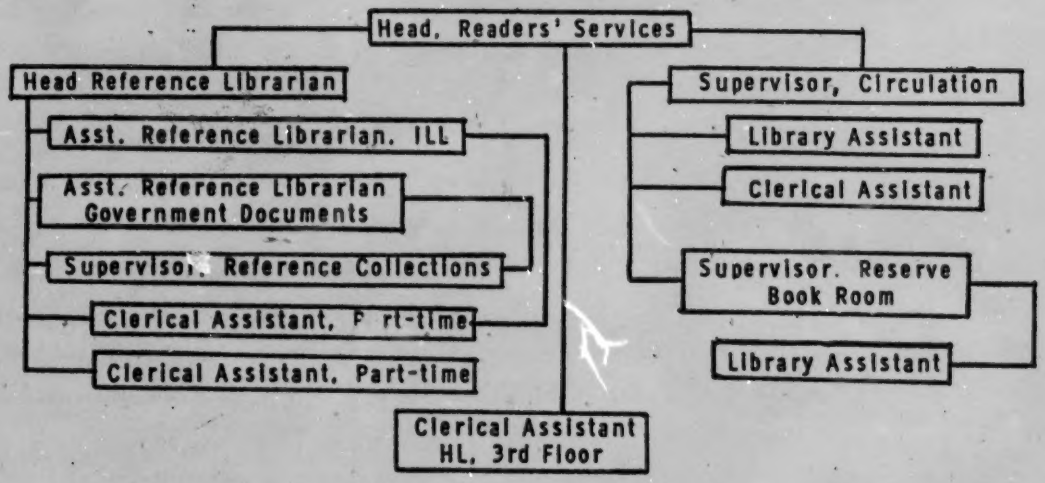
The chart does not indicate that the library system consists of three libraries: Hunt Library, Engineering and Science and Mellon Institute. Because of variation of location, size, subject collection and needs of patrons there is a great difference in the structure and operations of these libraries.

The library is organized in a hierarchical system. Formal department head meetings with the Director are held monthly; department heads meet informally with the Director and each other more frequently.

Departmental Descriptions

These are not meant to be job descriptions. They are merely indications of what happens in each department and who reports to whom. These were not designed to be exhaustive but meant only to give general impressions of how departments operate.

READERS' SERVICES



Readers' Services

The Readers' Services Department encompasses the Reference Department, Circulation Department, including the Reserve Book Room, and is responsible for the personnel and service of the periodical collection.

Reference

The Reference Department has a staff of three professional librarians, three clerical assistants (two part-time) and part-time student assistants. The professional librarians are scheduled on the two reference desks 8 a.m. - 5 p.m. Monday through Friday and singly 1 p.m. - 5 p.m. Sunday (the assignment is rotated). In addition to performing the duties listed below, all librarians (including the Head) serve 19 hours a week at the Reference desk. Reference duties include computer-based bibliographic searching.

The Head of Readers' Services administers and is responsible for the daily operation of the department and its personnel. She actively participates in reference service and interprets policy for all of Readers' Services, and is responsible for the selection and maintenance of the reference collections. She is active on University committees.

The Interlibrary Loan Librarian services ILL and photocopy requests with the assistance of a part-time clerical assistant who maintains records and

completes all clerical operations incident to service.

This librarian also has major responsibility for liaison and book ordering for H&SS, GSIA and SUPA departments in addition to sorting and re-ordering library replacements for Hunt Library, ordering leisure books, and developing service for social statistics tapes.

The Documents Librarian is responsible for maintenance of the document collections, directs the Supervisor of the Reference Services and one part-time clerical assistant in ordering, disposition, number assignment, maintenance of current files, and the shelf list for the document stock--federal, state and local.

This position also has responsibility for liaison with the History Department; preparation of a special bibliography for the English Department; maintenance of the Information File for the Reference collection; and prepares reports of activity statistics.

The Supervisor of Reference Services oversees the maintenance of the collection and the shelf lists; supervises the annual inventory; prepares items for binding; interviews, assigns and supervises the student workers; obtains catalogs from other schools; maintains personnel time and vacation records; orders and maintains supplies; collects statistics; types reports; and supervises the two part-time clerical assistants. All are responsible for shelving and general clean-up of the reference areas. When the librarians are required to attend staff meetings, she provides limited service at the reference desk.

Circulation

The Circulation Department has a staff of three full-time employees: Supervisor of Circulation and two library assistants for day operations Monday through Friday and rotated Sunday 1 p.m. - 5 p.m.; two night supervisors 5 p.m. - 12 p.m. Sunday through Thursday with student assistants; Friday and Saturday 5 p.m. - 9 p.m. with graduate student assistants. A clerical assistant works Saturday 9 a.m. - 5 p.m.

The Supervisor of Circulation is responsible for the general circulation operations. The position also carries responsibility for supervising student shelving of books in the humanities and social science collections, the use study and annual inventory of this collection, and for shelving stored science periodicals. She maintains time and attendance records, supervises and assigns duties to library assistants and student workers.

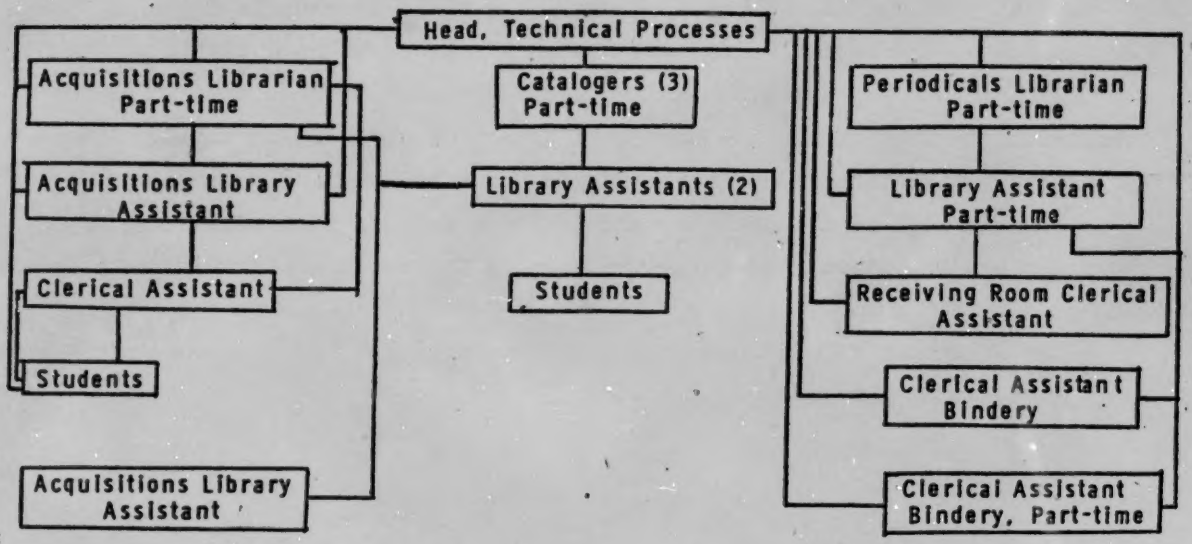
Reserve Book Room

The Reserve Book Room staff has two full-time employees — a supervisor and a library assistant, plus part-time student workers. Personal faculty materials as well as those owned by the library are handled in this collection. Copyright limitations have made necessary reorganization and disposal of much photocopied material. A use study is conducted through the school year.

Periodicals

The Periodical collection on the third floor has one full-time clerical assistant 8:30 a.m. - 5 p.m. Monday through Friday with student assistants working night and weekend hours. The clerical assistant shelves and supervises shelving of periodicals and newspapers, files and maintains records for photocopy orders, and helps patrons locate periodicals or use microforms.

TECHNICAL PROCESSES



Technical Processes

Technical Processes has a total of 13 staff members, including part-time, for an equivalent of eight full-time employees. There are two full-time professional librarians (one is the Head of the department), three part-time professional librarians, four full-time library assistants, one part-time library assistant and two full-time clerical assistants.

Head of Department

The Head has the responsibility for the administration and the overall operation of the department and its personnel. She not only supervises the cataloging but she also catalogs when other duties permit. She is responsible for the correct understanding and interpretation of the many changes in the cataloging standards and rules so that the original cataloging through the OCLC system meets peer standards. She attends meetings of the Heads of departments to discuss and help make decisions on library questions and is an active participant on university committees.

Acquisitions

The acquisitions librarian is a part-time cataloger, orders the books for the library, is the archivist as well as the gift librarian.

The library assistant processes bills for books, periodicals, binding and slides, authorizes payment of invoices and indicates correct funds to be charged in accounting. She also itemizes charges for files to compile a monthly budget, and corresponds with periodical dealers on all problems relating to payments.

Another library assistant in technical processes checks orders for the acquisitions librarian in the card catalog and on the OCLC terminal. She also processes gifts. She files catalog cards and edits catalog records on OCLC.

The clerical assistant types all the book orders, correspondence for the Acquisitions Department and checks in the new books. She also returns defective and duplicate books.

Two students help file and trace orders, record vendor numbers on invoices and place cards in alphabetical order.

Cataloging

Cataloging is done by the Head of Technical Processes, the Acquisitions Librarian, the Music Librarian and one part-time librarian.

A library assistant places cataloging information, including workforms, on the OCLC terminal for production of catalog cards. She processes catalog cards for filing and is responsible for processing books to be put in the stacks. She also processes Carnegie-Mellon theses for University Microfilms.

Another library assistant has full authorization to search for cataloging information and prepare preliminary workforms on the terminal which includes putting in data to produce catalog cards. She also catalogs fiction titles,

copies and volumes, revises the continuation file and the shelf list filing and files in the card catalog. Students search catalog information and label books.

Serials

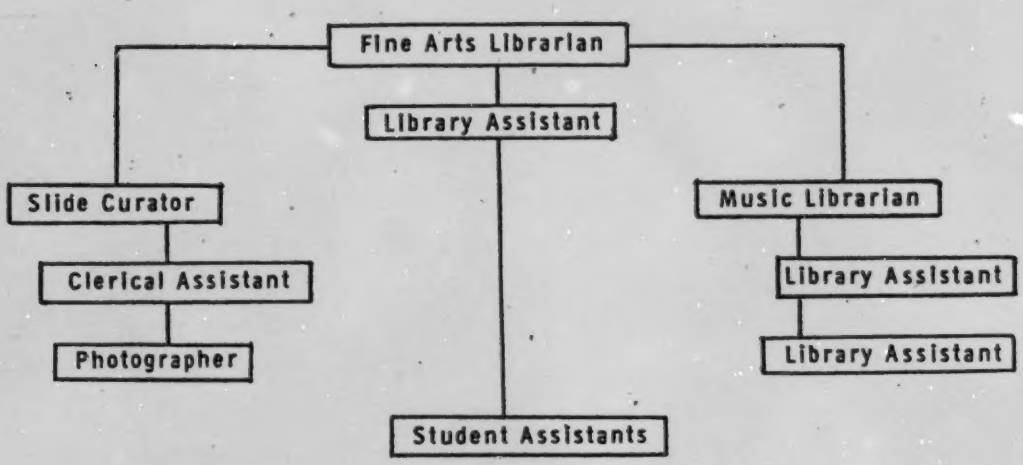
In the serials department there is one part-time librarian who is in charge of the acquisition, cancellation and cataloging of serials. She also checks the unassigned mail and forwards it to the proper person.

A part-time library assistant processes periodicals after they are cataloged. She also supervises binding and handles problems of journals and binding.

There is one clerical assistant working in the mail room who checks in all the periodicals and newspapers. She opens all the new books, helps with the bindery, traces periodicals, and treats new books and periodicals for security.

A part-time clerical assistant pulls journals that are complete and gets them ready for the bindery.

FINE ARTS LIBRARY



Fine Arts

Fine Arts has a staff of one professional librarian and one library assistant. The Slide Room has a staff of one slide curator, one clerical assistant, and one photographer who is funded by CETA program. Thirteen student assistants help to

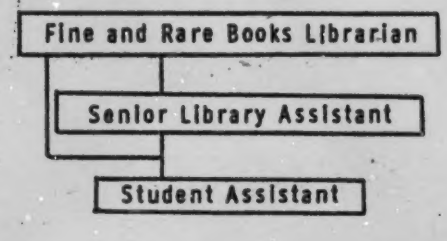
cover evening and weekend hours.

The Fine Arts Librarian administers the department, provides reference service and bibliographic liaison with Fine Arts faculty.

The Library Assistant is in charge of the 4th floor Fine Arts collection when the librarian is absent. She assists with ready reference to patron and phone requests; performs various clerical jobs; assists in circulation preparation and filing of prints and unmounted picture files; shelves books and supervises student reading of shelves; and helps to maintain the 3-M copy machine.

Student assistants are in charge of the Fine Arts Library during evening and weekend hours.

FINE AND RARE BOOK ROOM

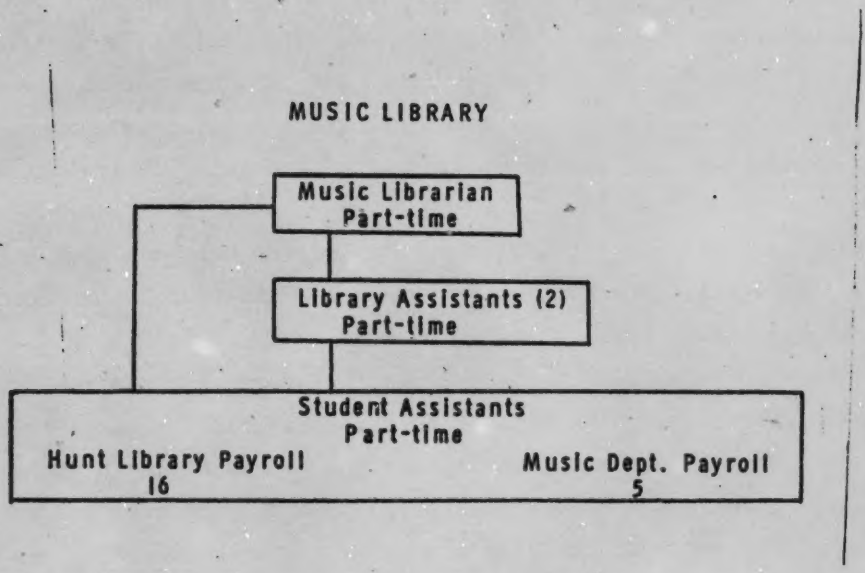


Fine and Rare Book Room

The Fine and Rare Book Room has a staff of two: one professional librarian and a Senior Library Assistant with university degrees in art and calligraphy. Student assistant help varies.

The Fine and Rare Books Librarian is responsible for development of the collection, cataloging of books for the Fine and Rare Book Room, planning and mounting exhibits and writing exhibit notes, working with donors, answering reference questions and giving tours and talks for classes and special groups.

The Senior Library Assistant, a calligrapher, is responsible for the care and conservation of the collection. She mounts exhibits in the Fine Book Room cases under the direction of the Librarian; she has full responsibility for the displays of book jackets in the first floor exhibit cases. In the absence of the Fine and Rare Books Librarian the Assistant has responsibility for care and security of the rooms and gives tours and talks on the collection.



Music Library

The Music Library functions as a complete unit within the Hunt Library and maintains strong ties with the teaching faculty of the Music and Drama departments. The staff includes a music librarian, two library assistants and approximately 21 work study students. All work part-time in the Music Library. The Librarian is scheduled to spend 3/5ths of her time in the Music Library and 2/5ths in Technical Processes as a cataloger. In practice the ratio is usually 4/5ths to 1/5th. Each of the two library assistants is scheduled to work 20 hours a week. Professional commitments often interfere, however. Work study students cover the evening and weekend hours.

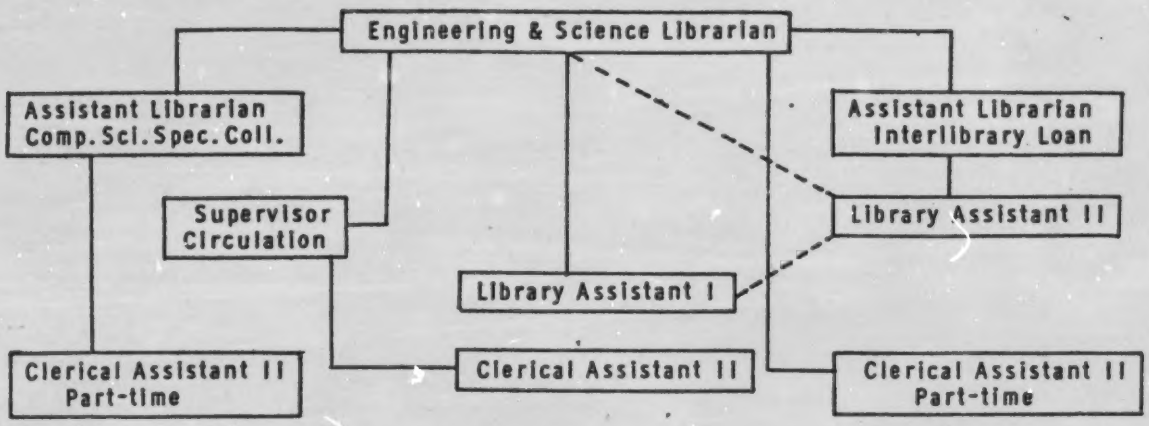
In addition to her administrative duties, the Librarian works with the Music Department library representative and faculty to build collections of recordings and music. Gifts are secured from alumni, faculty, students, friends of the library and other interested persons for the collection. The Librarian catalogs music, records and tapes with the aid of the OCLC terminal, Library of Congress proof slips and Music Books on Music and Sound Recordings. Music materials are processed in the music control room. The Music Librarian reports to the Fine Arts Librarian as well as to the Director when working on special projects. When in Technical Processes she reports to the Head there. She is active in University affairs.

The library assistants and work study students play requested selections for individuals or classes. They check returned materials to see if all parts issued with a folder have been returned. Repairs are made if needed and the materials shelved. They type, clean records and equipment, check headsets and listening stations for problems, circulate materials, do preliminary searching, and collect fines.

Welcomed gifts have enlarged our collection but have also created a backlog in our cataloging. Uncataloged materials are not readily available to the prospective user.

With the Music Department scheduled to become a conservatory, even more of the Music Librarian's time will be needed to upgrade required materials. The orchestra, choral, and vocal works are the most complete in the collection. The instrumental and chamber music need to be supplemented and many parts replaced. The new musical theatre program and opera division has created a tremendous increase in demand for piano-vocal scores and records to support these programs.

ENGINEERING & SCIENCE LIBRARY



Engineering and Science Library

The Engineering and Science Library is staffed by a head librarian, two assistant librarians, one supervisor, two library assistants, one full-time clerical assistant and two part-time clerical assistants.

The Head Librarian is in charge of the library and all staff and reports to the Library Director. She interprets policy for the Engineering and Science Library, acts as bibliographic liaison with the faculty and serves on university-wide committees.

The Engineering and Science Assistant Librarian is in charge of interlibrary loans. The ILL unit also consists of a Library Assistant and work study students. For ILL the Library Assistant reports to the Assistant Librarian in charge. For other duties she reports to the Head Librarian. The Assistant Librarian shares reference duties with the Head Librarian.

In 1976 an assistant librarian was employed to head the Computer Science special collection housed in the Computer Science Browsing Room of the Engineering and Science Library. A part-time clerical employee was hired to assist the Computer Science Librarian. Salaries, equipment and operating costs are paid for by the Computer Science Department.

The Supervisor is in charge of circulation, work study students and bindery. She reports to the Head Librarian and has one clerical assistant who reports to her.

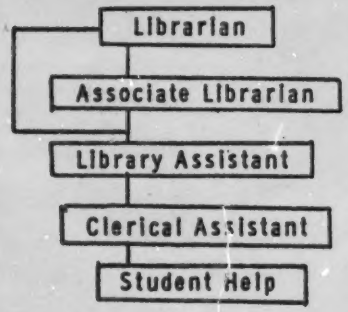
The Reserve Book Room work is carried out by a library assistant aided by a part-time employee and work study students.

All support staff work at the circulation desk, get periodicals ready for the bindery and are responsible for the shelves being in order. One support staff person and a student staff the library on Saturdays. Graduate students staff the circulation desk in the evenings and on Sundays.

The work study students shelve books, photocopy for ILL, carry the mail to and from Hunt Library and do other tasks to assist the regular staff.

Except for cataloging and acquisitions, the Engineering and Science Library functions as an independent library.

MELLON INSTITUTE LIBRARY



Mellon Institute Library Organization

The Mellon Institute Library staff consists of a librarian, an associate librarian, a library assistant, a clerical assistant and student help. The Library serves the Graduate Departments of Chemistry and Biological Sciences as well as Carnegie-Mellon Institute of Research. CMIR is the sponsored research division of Carnegie-Mellon University, and it has a total of 246 personnel. In addition to the usual library services, the Mellon Institute Library acts as the purchasing agent for books, subscriptions, memberships, photocopy requests, etc. for the sponsored research groups. The Librarian is authorized to approve for payment all invoices covering such purchases and to charge costs to the appropriate account. The Library issues its own purchase orders and approves its own invoices, independent of the University Library Acquisitions Department.

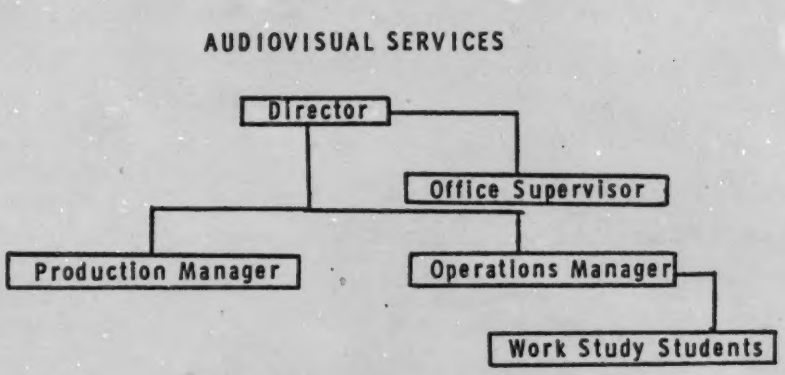
The Librarian is responsible for the general administration of the library including the management of the library materials budget. Specific responsibilities include acquisitions, purchasing, reference, maintenance of special files and archives.

The Associate Librarian catalogs all library materials, maintains the card catalog, performs literature searches (both manually and using machine-readable databases), prepares author bibliographies, translates German articles, handles reserve books, maintains Information File and answers reference questions.

The Library Assistant is in charge of the periodical collection. When a clerical position was eliminated in 1976 she assumed responsibility for circulation. She answers some reference questions and assists non-technical staff in verification of materials held by the library.

The Clerical Assistant fills requests for photocopies, prepares books for circulation, carries mail to and from the mail room, opens mail and distributes it within the library, and supervises shelving.

Student help types purchase orders, interlibrary loan and photocopy request forms, files and handles other routine clerical duties.



Audio-Visual Services

The staff of Audio-Visual Services consists of Director/Librarian, Production Manager, Operations Manager, Office Supervisor and student help. Beginning in September of 1978, the University Slide Library operations and staff, consisting of Slide Curator and Photographer/Clerk, will also come under the jurisdiction of Audio-Visual Services.

The operating and equipment budgets of Audio-Visual Services are separate from that of the University Libraries. The Center issues its own purchase orders and approves its own invoices.

The Director/Librarian is responsible for media reference service, cataloging of Audio-Visual materials, purchasing of equipment and software, promotion, production supervision and design of instructional media on campus and department administration including general and project account management.

The Production Manager produces and directs Audio-Visual Services instructional television and audio programs, trains and supervises student television crews, edits and dubs media productions and serves as a support senior Audio-Visual operator.

The Operations Manager handles routine Audio-Visual equipment maintenance and repairs, trains Audio-Visual student operators, serves as a department technical consultant, prepares inventory and parts lists and functions as the senior Audio-Visual operator.

The Office Supervisor is in charge of all department clerical duties. Student help handles all routine Audio-Visual operator and delivery requests, performs daily equipment inventory and maintenance checks and functions as support clerical staff. Senior operators serve on TV production crews. The average of student help per week is a total of 80 hours.

Administrative Offices

The Director is responsible for overall management of the University Libraries. She is actively involved in regional cooperative efforts, national library affairs and long-range planning for the libraries.

The Administrative Assistant assists the Director in preparing yearly proposals for budget and salary and statistics for grants and proposals such as the Higher Education Act and Health, Education and Welfare. She compiles data for the Annual Report, gives full authorization for forms used in maintaining and operating the library supply and equipment needs, including long range planning for annual needs via inventory in early May; supervises building and janitorial maintenance; prepares Personnel Action Notices and personnel files for all employees. She also serves as the Director's secretary with its usual functions.

Evaluation

In the judgment of the library staff, the most obvious weakness appears in the placement of the library within the University organization. There is no direct link between the library and academic deans. The library Director and Vice Provost for Information Service have excellent rapport and work well together. However, with two different personalities this advantage would be lost.

The Middle States report of June 1976 viewed the removal of the library from the control of the Academic Vice Provost as a reflection of a negative attitude on the part of the University for the library. This report also states "An academic operation should report to academic officers, and academic operations begin to lose much of their power and magic if they are seen as anything other than academic."[1]

The library organizational chart does not give an accurate portrayal of the current library organizational picture. The three committees, Faculty, Student, and the Hunt Library Visiting Committee have not been active for some time and therefore should not appear on the chart. There is a University Library Committee, appointed by the President, which is not listed on the chart. The purpose of this committee is to study various areas and problems of the library and make recommendations to the director. The position of Associate Librarian has not been filled since 1971.

Carnegie-Mellon Institute of Research should be included with the departments served by Mellon Institute Library. While CMIR's staff of 246 require a great many library services, they do not receive a book allocation.

The present organizational chart does not depict the library's internal grouping and individual performance relationships. Therefore this chart cannot be employed as a guide to the many complex working relationships that specify responsibility and accountability.

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1. Middle States Association, Evaluation Team Representing the Commission on Higher Education of the Middle States Association. "Report to the Faculty, Administration, Trustees, Students of Carnegie-Mellon University." (Pittsburgh, November 14-17, 1976) p. 19.

The previous Library Director was assisted by an Associate Librarian, who was not replaced after her retirement in 1971. The duties of personnel administration, housekeeping, and inventory control which were performed by the person in this position have been divided between the Director and her Administrative Assistant.

In the Mellon Institute Library there is no clerical person to verify interlibrary loan requests, to handle the monthly billings, or to type orders and invoices. In 1975-76, 1176 such orders were processed. This is a half-time job in both Hunt and Engineering and Science, but in Mellon it is presently done by a work study student whose hours are irregular. The Head Librarian must often perform these tasks.

The Mellon Institute Associate Librarian, who is the cataloger, must also perform clerical tasks which are handled by support staff in the other libraries. These include typing of catalog cards and the adding of continuations to the sheet shelf lists. This leaves very little time for reference work.

Long-range planning and special projects are neglected because much of the professionals' time must be devoted to clerical duties.

A genuine human resource is the dedicated staff who strive for excellence in spite of increasing workloads. The library staff has decreased 45.5 to 41.5 in five years while new programs have increased. There are those who feel that because of this understaffing the departments are not always able to accomplish their goals. A program of library instruction, for example, although needed, cannot be accomplished without reassigning some of the duties of the present staff.

Recommendations

1. On the basis of the opinions of the professional staff expressed during the interviews as well as those expressed by the Middle States Association Team, it is recommended that the academic affiliations of the Library be strengthened. Librarians on the Carnegie-Mellon University campus were granted faculty status on the basis of their role in instructing students and advising and assisting faculty in their academic and research pursuits. This essential criterion of faculty status should naturally dictate the position of the library within the academic structure.

2. With respect to the organizational chart of the libraries, the Task Force recommends that an ad hoc committee be appointed to prepare a new version which will provide a true picture of the current structure. In addition a number

of participants in the interviews expressed the desire to have an auxiliary chart depicting the library's organization by positions. In the opinion of the Task Force a chart of this kind would be a definite tool to demonstrate the actual line of supervision.

The revised chart would delete committees no longer functioning, add the University Library Committee, the Administrative Assistant to the Director, and place the three libraries as to their actual structure and operations.

3. We recommend that the position of Associate Librarian be filled. This would remove some of the pressure from the Director. The size of the staff does not warrant a personnel officer so this responsibility could be delegated in part to the Associate Librarian. Among her other responsibilities would be communication and assisting in policy formulation. She would serve in the absence of the Director.

4. We recommend that the Administrative Assistant prepare a chart of procedures for action in emergencies. This should list the names and phone numbers of the university personnel to be called. The chart should be prominently displayed in the Administrative Assistant's office. Furthermore, we recommend that Physical Plant, Security and any other appropriate departments be given a list of those library staff members authorized to request service.

5. Because of the special subject expertise of the Music Librarian, the nature of that library and the close ties between that facility and the teaching faculty, we recommend that she spend her full time supervising the acquisition, arrangement and use of that collection.

6. We recommend hiring another clerical assistant in the Mellon Institute Library.

7. Because of normal depreciation of the music listening facilities, a budget line for capital expenditures should be established.

Supervisory and Leadership Practices

Description

Supervisory practices in the University Libraries were ascertained from answers to the questionnaire (see Appendix J) and interviews with the staff. In the interviews supervisory leadership styles were described as ranging from autocratic to informal. Supervision is defined here as encompassing any duties which oversee or coordinate the work of others. A minority of the support staff

interviewed view the supervision they receive as being autocratic. Questions 18 and 19, on the survey, however, revealed stronger reservations about staff participation in management. With few exceptions the interviews would indicate satisfaction with the type of supervision under which they work, whether it is autocratic or less structured; this is indicated in the responses to question 10. Supervisors stated that generally they are consulted when there are positions to be filled in their departments. However, three librarians cited instances of personnel assigned to their department without their having been consulted.

The Library Director stated that it is in the best interest of the Library for her to promote from within the Library.

The Library Director was described in the interviews as being receptive to the needs and problems of the staff. Some major policy plans affecting the internal policies of the library and the departments are discussed at monthly professional staff meetings with direct input from the librarians, but final decisions rest with the Director and the department heads. Discussion can be cursory or after the fact, however.

Department heads see their responsibilities to include:

1. Making work assignments as well as seeing that the work is accomplished.
2. Scheduling.
3. Training of staff members.
4. The motivation of staff members through promotions, granting of privileges, recognition of their accomplishments, etc.
5. Provision of adequate resources to get the work done.
6. Being available to staff and open to suggestions.
7. Overseeing maintenance of work areas.

Evaluation

Our interviews revealed that the department heads are considered to be dedicated leaders with an open door policy for their staff and patrons. The Carnegie-Mellon University library has always enjoyed an excellent reputation for service within the Pittsburgh area because of the attitude of the professional librarians in satisfying the requirements of the users of the library. Expertise and services provided by the library are enhanced by the long length of service

of the majority of its staff.

Morale of the staff varies according to the management style provided by individual supervisors. In the Technical Processes Department, for example, where every person felt very free to talk to the Department Head, supervision was rated quite effective. The problems in communication were revealed by the questionnaire (see question 8) but since it has been reported in depth by the Management Task Force it will not be included in this report.

Those of the staff interviewed feel that their supervisors seek and use their ideas, giving credit when due. (See question 14.) Weekly discussion meetings held in some departments and monthly supervisors' meetings as well as the professional librarians' monthly meetings serve to improve communications, solve problems and improve morale. This feeling is particularly evident in the answers from Engineering and Science and Mellon Institute. However, the answers to the first question indicate that the staff would like more participation.

Morale of the support staff is adversely affected by the feeling that there is too rigid a division between professionals and non-professionals on the library staff. Answers to question 16 indicated it is not too great a problem; however, the interviews revealed that there is a difference of opinion on this question. Criticism is directed to the professionals by a majority of the support staff and several professionals concur. This problem may have been created by the strong hierarchical system or it may be due to personalities. No immediate solution was offered.

In the interviews support staff expressed dismay at their lack of opportunity for input into library decisions when their department was involved. Forty-one staff members expressed a desire for brain-storming sessions.

Supervisors find it difficult to supervise part-time and student help who work at odd hours. There is too great a dependence upon student help whose academic requirements interfere with their work schedules. This is a particular problem in the public areas. Constant training of high turnover student help requires excessive amount of staff time. Student training manuals used by the Engineering and Science Library, Music Department, Slide Room and Print Division are of great value.

There are times when the libraries are open without professional staff. Hunt Library is open Monday through Thursday from 5 p.m. to 12 p.m., Friday from 5 p.m. to 9 p.m., all day Saturday from 9 a.m. to 9 p.m. and Sunday from 5 p.m. to 12 p m., without professional help. This amounts to fifty-one hours or

approximately half the total time the Library is open. Library statistics derived from the Student Survey taken by the Services and Collections Task Force, show that while 60 percent of the students visit the Library between 8 a.m. and 5 p.m. weekdays, 25 percent use the library after 5 p.m. and 15 percent on the weekend. In the interviews criticism was expressed for the lack of a permanent staff member to supervise the second floor of Hunt Library.

The Head of Readers' Services shares an office with at least four other staff members as well as with a number of students. This situation prohibits any privacy required for such activities as interviews, phone conversations, conferences, etc.

Merit rating forms are used twice a year to evaluate employees. These are considered by the majority to be inadequate. Some of the reasons given are:

1. selection of responses are not wide enough in scope;
2. they become too repetitious after a few years;
3. self evaluation is objectionable;
4. consistent standards are not applied.

Recommendations

1. The Task Force recommends that staff people affected by decisions or the hiring of new personnel should be involved with the making of the decisions.

2. All positions should be titled and clearly defined. There should be in written form a clear listing of the specific responsibilities of each employee. This is not to be confused with the job descriptions nor the work manuals, but should be an outline naming the tasks to be performed.

3. Management intraining workshops by Personnel, psychologist, etc., should be held at least twice a year to improve supervisory skills.

4. The merit rating form should be re-evaluated. It does not seem to be serving its purpose in its present form. The same rating form should not be used for old and new employees. If and when merit raises are to be awarded based on merit rating forms, supervisors must all rate their staff on a uniform scale. All job openings for positions in the library should be posted and all staff members having proper qualifications should be given the opportunity to apply for these positions.

5. A definite program and time schedule should be initiated for the orientation of new staff members. This orientation program would cover each department and show the interdependence of every department. One cannot absorb all the workings of the Library at one briefing; therefore a time schedule would be well advised.

6. It is recommended that an auxiliary Library Organizational Chart be prepared in conjunction with the organization chart recommended in the organization section of this report. This would be updated by the supervisors to show the names of people currently filling the positions in their departments. This chart would clearly define accountability and help with orientation of new personnel. This recommendation results as a request from several members of the staff.

7. Someone should be assigned to the second floor. It is recommended that we should return to the use of Library School students to cover evening and Sunday hours at Hunt and Engineering and Science Libraries.

8. The Task Force strongly recommends that a private office be provided for the Head of Readers' Services.

9. The Task Force recommends that discussion sessions be instituted as a regular practice. These could be held twice a year with half the library staff attending at once. These would be a good release for "gripes", many of which require only minor adjustments to alleviate.

10. Effort should be made to hire fewer, more reliable student help. An increase in wages coupled with more stringent attendance rules would eliminate some of the high turnover problems. Pay scale for work study students should be uniform throughout the campus.

STAFF DEVELOPMENT

Description

There is no formal staff training program in the library system. Yet opportunities for development are afforded in several ways. Subject courses on the campus are available to full-time library staff with remission of tuition. Courses may be audited, taken for credit toward a degree or for credit as a special student. It is necessary to make application for such courses and secure the approval of one's immediate supervisor for released time. Courses, workshops and

colloquia are available nearby at the University of Pittsburgh Graduate School of Library and Information Sciences. Other opportunities are afforded through meetings, workshops, and conferences sponsored by such organizations as Pennsylvania Library Association, Special Libraries Association, Pennsylvania Regional Library, Tri-State, Medical Libraries Association, Music Libraries Association, etc. Support staff as well as professionals attend training sessions on the use of new systems such as the OCLC, Lockheed and SDC databases. The University is in the process of instituting a new training program "to enhance performance in staff members' current positions, as well as to qualify them for promotion within the University."[2]

Recently a campus orientation program has been initiated to give the new employee a brief description of the University. This also consists of explanation and discussion of the literature describing benefits available to Carnegie-Mellon University full-time employees. Questions are answered to prepare the employee for enrollment in their choice of hospital and medical insurance plans as well as other benefits available.

On campus the Women's Task Force, organized in the fall of 1977, is working to provide educational opportunities in the necessary skills for advancement and for meaningful careers. The group provides information on available positions and educational opportunities; it sponsors luncheon lectures with programs attuned to women's needs; and it publishes a newsletter and sponsors a Career Opportunities Center in the Hunt Library. A course entitled "Managerial Skills for Women" was the group's first venture into the academic program. It ran for 15 weeks using eight instructors with expertise in psychology, industrial relations and management. In the spring of 1978, an Assertiveness Training course was offered by the Women's Task Force.

Evaluation

In an academic setting there are few courses provided that will develop the skills needed by clerical personnel or that are library oriented. Librarians avail themselves of courses such as languages, history and subjects related to their collections. Released time necessary for taking advantage of courses is too

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often impossible to obtain because of the limited staff. Tuition remission is not available for courses at the Graduate School of Library and Information Sciences, University of Pittsburgh.

Limited funds have prohibited staff members from taking full advantage of conferences, meetings and workshops. There have been very few instances when the entire cost of attending a meeting has been provided. Registration fees, hotel expenses and partial transportation costs are available outside the area for only a very limited number of the staff. Assignment to these conferences is not on a regular schedule and is limited to professional staff only.

There is little room for advancement of the support staff in the libraries. In the event of the installation of new technologies and systems, staff positions and skills will require up-grading with a possible reclassification of some positions by the Personnel Office.

Without paraprofessional training support staff should not assume additional responsibilities. In the answers to the questionnaire a majority of both professional and support staff (see question 2) indicated a great need for more opportunities to encourage the staff in pursuit of learning for advancement in their field or to develop their skills. A majority also indicated they would take advantage of such opportunities. (See question 3.)

Recommendations

1. The Task Force recommends that the Carnegie-Mellon University libraries staff sponsor and organize a workshop for paraprofessionals that would be offered to the library community. This would be similar to those formerly offered ty the Carnegie Library of Pittsburgh. Proceeds from such a workshop to be placed in a special fund to be used by the Carnegie-Mellon University libraries staff to attend a greater number of meetings, workshops and conferences.

2. Staff should be encouraged to take courses which will improve their abilities in their field.

3. Reciprocal classes with the University of Pittsburgh should be investigated and a report written, circulated and filed.

PERSONNEL PRACTICES

Description

Vacant job positions for support staff are listed with the University Personnel Office. Job descriptions and salary for the position are posted throughout the University giving Carnegie-Mellon University personnel the first opportunity to apply for the position. Many times the position will be filled from applications already on file in the Personnel Office. If the position has not been filled in six days, it will then be advertised in the local newspapers. The University follows the Affirmative Action Program in hiring practices.

The Library Director prefers to promote from within whenever possible and then to fill the vacancy thus created from without. The library has on file applications for professional positions that arrive in the mail from all over the country. In the case of a vacancy for a professional that requires special qualifications that cannot be filled locally or from applications on file, the Personnel Office will advertise in professional journals recommended by the librarian. For support staff a personnel requisition form is sent to the Personnel Office and they start trying to fill the position.

Interviews and any testing required for support staff positions are arranged by the Personnel Office. Final decision for the selection of personnel rests with the Library Director, who usually follows the recommendations of department heads.

Librarians were granted equivalent faculty rank in 1974, after having enjoyed faculty status since 1940. They serve on University Committees and the Faculty Senate, yet they are working without contracts and have not formally been granted opportunity for tenure. According to the Director to date no librarian has applied for a sabbatical leave.

Each support staff position in the library has its own job description listing specific duties as agreed upon jointly by the employee and supervisor. These are on file in the library and in the Personnel Office.

Of a total library staff of fifty-five employees, eleven are part-time and three are CETA (Comprehensive Employment and Training Act) employees.

Part-time employees (those who work a maximum of 1,000 hours a year) are eligible for some fringe benefits. They may participate in the university staff retirement program and are eligible for any of the three university health

insurance plans, although as part-time staff members they must pay the full health insurance premium. Part-time people may also participate through payroll deduction in the Carnegie-Mellon University Credit Union. However, federal regulations make it impossible for the Credit Union to guarantee loans to part-time employees.

All Carnegie-Mellon University staff employees are eligible for unemployment compensation according to guidelines laid down by the Bureau of Employment Security. However, the University home purchase (second mortgage) plan is currently available only to Carnegie-Mellon University faculty and administrators.

The University remission of tuition plan is available for all full-time employees and their families. Support staff hired after 1972 are eligible for only 60% tuition remission. Other benefits for Carnegie-Mellon University personnel include retirement plan, mandatory group-life insurance, health insurance, workmen's compensation, unemployment compensation and total disability benefits. These are detailed in the faculty and staff handbooks.

There are few benefits available to part-time employees as they are not entitled to paid vacation, sick leave or tuition remission. Additional fringe benefits for part-time employees are being studied by the University Staff Council as outlined by an article in Focus of April, 1977.

Evaluation

Reward systems should motivate employees to accept employment, to maintain a good attendance record and to perform effectively in their position. This reward system should also be designed to retain the most effective performers. When all employees are rewarded at the same level the better employees tend to feel that they are being treated inequitably. Competitive reward levels based on performance encourage the better performers to remain with the library and to feel greater job satisfaction. During the interviews many of the staff expressed the view that any raises granted are not merit raises since they are usually less than the increase in the cost-of-living index.

Because the library is obliged to pay part of a discharged employee's unemployment compensation from the regular budget, supervisors should carefully monitor all new employees in their probation period and document their assessment. Even an employee who was recently discharged for cause had to be paid unemployment compensation.

University policy does not encourage the filling of positions by lateral moves; however, since there are so few promotions available in the library, lateral moves might aid in further staff development.

All departments on the campus do not enforce personnel policies equitably. Throughout the interviews dissatisfaction was expressed with the inequities existing in the enforcement of such policies as personal telephone calls, adherence to coffee break and lunch-time allotments, medical and dental appointment time and plus/minus time. Another dissatisfaction is that employees have their luncheon or break period interrupted in order to solve problems in their department.

One of the strengths of the library staff lies in the dedication and longevity of service of its many part-time employees (on an average of ten years). However, they do not receive fringe benefits commensurate with their abilities and years of service.

The University provides the services of an ombudsman to handle grievances.

There is no structured orientation program in the Library. Too great a dependence is placed upon work-study students to perform regular tasks. This causes problems at times when the students are otherwise occupied with their academic responsibilities.

Some support staff members feel they are being asked to perform professional tasks at support staff wages.

Recommendations

1. The Task Force recommends that more weight be given to performance evaluation of individuals when raises are being considered.

2. It is recommended that it be stressed emphatically to all new employees that they are working on probation for six months. If, after a thorough training period with strict supervision of their work, they do not prove to be satisfactory, the supervisor should exercise the option of releasing the poor performer. The Library and the staff are the losers, when this practice is not followed. A supervisor must be firm in this respect. It is equally important that supervisors properly document specific instances of infractions of rules and poor performance of staff.

3. We recommend that the libraries adhere to the University policy of posting all library staff vacancies giving all members of the library staff the opportunity

to make application.

4. The Task Force recommends that the Director seek an increase in the budget to be applied for the purpose of hiring additional library personnel.

5. The Task Force suggests a survey of background talents and strengths in order to take advantage of these abilities when and if the need arises. Special language and artistic abilities should especially be noted.

However, strict guidelines are needed for hiring personnel. In the case of over-qualified personnel the Library has the obligation to make sure that these persons are not asked to perform tasks not expected of less qualified personnel for whom the job was designed.

6. Speakers should be invited to address the library staff when the need arises for clarification of such personnel policies as health insurance, life insurance or TIAA choices or changes.

7. The issue of contracts for librarians should be pursued vigorously.

8. There should be a greater effort made to include part-time employees in university fringe benefits.

Peggy Hinchcliff
Mary Lou Kennedy
Myrtle Nim
Melva E. Raynovich, Chairman
Alberta Stewart
Margit Thunander

HUMAN RESOURCES TASK FORCE

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TASK FORCE ON TECHNOLOGY AND FACILITIES

CHARGE

The Task Force should investigate new library technologies as well as existing systems and their application to the Carnegie-Mellon University library system, keeping in mind the concept of the library as a learning resource center. Given the constraint of zero growth in available space, the Task Force should consider means of coping with an expanding collection and the optimum use of existing space.

BACKGROUND

Some of the problems tc be addressed by the Task Force had already been the subject of serious study within the last two years. The Engineering and Science librarian prepared a report on the space problem in the Engineering and Science Library.[1] The University Library Committee issued a second report[2] on the same question; data developed in the Engineering and Science librarian's study was the basis of this. However, the recommendations of the two reports were not in agreement, since the University Library Committee preferred acquisition of additional space to conversion to microform for journal storage.

An Ad Hoc Committee on the Disposition of Microforms, consisting of library staff members, completed a report on October 14, 1977. This concerned the handling and storage of microforms.

The Task Force felt that to repeat these recent investigations would be unproductive, although it did not always agree with the recommendations made. It has, therefore, devoted its efforts to the study of automated library systems, the development of sophisticated audio-visual facilities and to microform technology.

It should be noted that all the activities relating to systems have been undertaken with the provisions of the A. W. Mellon Fund grant in mind. The

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1. A. M. de Klerk. "Collection growth and space needs in the Engineering and Science Library." Pittsburgh, May 1977. (Typewritten)

2. Carnegie-Mellon University Library Committee. "Report of the library committee on the space problem in the E & S Library." Pittsburgh, 1977. (Mimeographed)

proposal for this grant states that "funds will be applied over three years to create both a sophisticated library delivery system that would provide access to a broad spectrum of information, and a strategy for controlling expenditures."

METHODOLOGY

The Task Force based its studies on extensive reading in the literature, interviews with the library staff, university and other experts in systems, (see Appendix M) and visits to local libraries having operational automated systems. The results of these activities were subjected to intensive discussion.

Having amassed the background information, the Task Force developed a number of recommendations for implementation in the Carnegie-Mellon University libraries, and criteria were set.

SPACE AND FACILITIES

The Carnegie-Mellon University libraries are housed in three buildings: the Hunt Library, a four-story building with basement and penthouse, the Engineering and Science Library on the fourth floor of Science Hall and Mellon Institute Library, which occupies the fourth and fifth floor of one wing of the Mellon Institute building.

These libraries all face space problems of one kind or another. There is an immediate need for 7000 to 8000 running feet of shelf space.[3] While there is space in the Hunt Library, it is in the wrong place or it is not available to the library. For example the Audio-Visual Department, located on the basement level, has need for much more room to accommodate projected expansion, but the Multi-purpose room adjacent to the Audio-Visual Department is presently being used as a classroom. The Hunt Institute for Botanical Documentation, which occupies the penthouse, has acquired office space on the third floor and storage space, as well as a bindery facility, in the basement. Older runs of journals held by the Engineering and Science Library are stored in the Hunt Library. The Mellon Institute Library has shelf space for about ten years growth assuming that there is no increase in the rate of acquisitions. However, office space is crowded and there is no room available for microform reader/printers.

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3. G. E. Rossell. "Proposal for a Pittsburgh library holding company." University of Pittsburgh, 1977. (Typewritten)

Since the university has adopted its zero growth policy there is little likelihood of building additions or new buildings for the library. The escalating cost of construction must be considered as an important factor. In 1976 the average square foot cost of library construction was $39.22. Geographical variations in construction costs ranged from a low of $28.10 in the middle west to a high of $45.03 in the northeast.[4] These costs will continue to rise in the future. Also to be considered is the fact that more space means increased maintenance cost and added staffing.

More space could be obtained for the Hunt Library collection should areas now occupied by the Hunt Botanical Institute be recovered. Conversion of stored journals to microform, or their deposit in a central storage facility would free space. These latter ideas will be discussed in full elsewhere in this report.

Several solutions to the Engineering and Science Library problem were considered by the University Library Committee in its report. This report was based on information developed in "Collection Growth and Space Needs in the Engineering and Science Library", Ann M. de Klerk, May 1977 (see Appendix N). The committee recommended that enough space be allocated to meet library needs for the next ten years. This space would be gained by the conversion of adjacent corridors to stack rooms.

Study space for students is at a premium. The university has only limited facilities for study halls in Skibo, the campus activity building. The ALA Standards for College Libraries states that the seating required for the typical residential college library shall be one for every four full-time equivalent students. Assuming the Carnegie-Mellon University enrollment to be 5000, there should be 1250 library seats with table space. Unfortunately the Task Force was unable to arrive at a figure for the actual number of seats in the university libraries because no uniform system of determining available seating with table space has been adopted, each of the three libraries using a different approach.However it has been determined that the Engineering and Science Library has one seat for every 14 students in the engineering and science program. The study carried out by the Services and Collections Task Force showed that Engineering and Science students use the Hunt Library for study because there was no room in Engineering and Science.

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4. Jerrold Orne and J. O. Gosling. "Academic library building in 1977," Library Journal 102 (1977) 2393-96.

(See Appendix C , questions 2 and 4.)

While there is a proposal for the establishment of a joint storage facility in the Oakland area under active study by the library directors of Carnegie-Mellon University and the University of Pittsburgh[5] no immediate realization should be anticipated. Although a possible site has been identified many decisions have yet to be made, i.e., ownership of stored items, staffing, document and/or volume delivery time. Financing for the project is available through a local foundation.

A plan has been put forward to make the Mellon Institute Library the depository for storage of chemical and biological sciences journals. This would not require much additional space since the two libraries have many duplications of back runs of journals acquired before the merger of the two institutions.

MAINTENANCE AND FURNISHINGS

In general all of the Carnegie-Mellon University libraries are well furnished in pleasant, well lighted space. However maintenance leaves much to be desired. Because of reductions in the total university maintenance budget, deterioration of equipment and furnishings is occurring. For example the Hunt Library has only two daytime janitors, who can be called to other jobs at the convenience of the Physical Plant Department. There is no cleaning schedule so it is impossible to follow up on neglected jobs. In the Mellon Institute building there is one janitor responsible for each floor, which contain offices and laboratories as well as the library.

Cost accountability required by the university for repairs and services prohibits proper upkeep. The library has to pay the Physical Plant Maintenance Department $11.00 to refasten a drawer pull, $16.50 for repair of a small edge on a formica desk and $5.50 to have two keys made. The charges for the services of skilled craftsmen vary, as those working in the Mellon Institute building are unionized; those on the main campus are not. Some representative hourly rates are: electrician, $11.00-$18.50 and carpenter, $11.00-$14.00. In order to have furniture or equipment moved the library must pay an outside moving company which charges an hourly rate of $24.00 for two men and a van, plus a $24.00 travel charge.

EQUIPMENT

Although the library has adequate office equipment for staff use -- electric and manual typewriters, desks, stenographers' chairs, filing cabinets, work tables, etc., -- much of this is in need of replacement or overhaul.

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5. G. E. Rossell. op. cit.

The coin operated photocopying machines for student and faculty use in the Hunt and Engineering and Science Libraries are not satisfactory. To illustrate, in April 1978 four of the seven comments in the E & S Question Book were complaints about the copiers. (This book is provided for library users to record questions when there is no librarian on duty.) The copiers were chosen primarily for the favorable lease arrangement offered; the library receives unlimited free copies for staff use. The copies, however, are poor and the machines are often out of service. Paper must be added by outside servicemen and no service is available in the evenings or over the weekends. At the time this report was written the leasing agent agreed to make provision for off-hour servicing and indicated that the present machines would be replaced by improved models. No action has yet been taken. The fact that the machines are often out of service contributes to vandalism and unauthorized withdrawals.

There is one Xerox 3100 copier available for staff use and the Fine Arts Department has a 3M copier that is satisfactory for copying halftones, but which is difficult to use.

The Mellon Institute Library has two Xerox copiers, a 4000 and a 3100. These are owned by Carnegie-Mellon Institute of Research and they are serviced by CMIR personnel. The library has no financial or maintenance responsibility and, in fact, receives a small income from the machines. These machines are fitted for Auditron counters that activate the copiers; departments and individuals lease their own counters. The library has three for its use and for the use of those who do not have counters, or who wish to pay cash for copies. Accounting for the Auditrons is done by CMIR personnel.

The microfilm reader/printers in the Hunt and Engineering and Science Libraries are not totally satisfactory. More sophisticated equipment is desirable.

RECOMMENDATIONS

1. The Task Force recommends that the proposal for a joint storage facility be pursued by Carnegie-Mellon University and the University of Pittsburgh.

2. It recommends that consideration be given to the storage of back runs of journals in the Mellon Institute Library.

3. It recommends that an inventory be made of seating with table space in the three libraries, using the ALA Recommended Standards as a guide. This could be done by work study students.

4. It recommends that janitorial services be improved. Either increased hours, more help or closer supervision is needed. Cleaning schedules should be prepared.

5. It recommends that spare parts and tools should be supplied to each department so that minor repairs to furniture and equipment can be made without calling on the services of Physical Plant. An adequate tool kit could be outfitted for about $50.00.

6. It recommends that typewriters be cleaned and serviced or replaced as necessary.

7. It recommends that photocopying equipment be reviewed with the object of replacing the present machines with ones that can be serviced as needed and that make better copies.

8. It recommends that consideration be given to underwriting part of the cost of prints from the microform printers, since the relatively high per copy cost (10¢-15¢) is a burden to students. Engineering and Science Library presently subsidizes part of this cost from the photocopying revenue.

MICROFORMS

"Given the constraint of zero growth in available space, the Technology and Facilities Task Force should consider means of copying with an expanding collection and the optimum use of existing space."[6] There are several directions to choose from in answering this charge. Remote storage facilities may be available in the future, either in conjunction with the libraries in the Carnegie-Mellon University library system or with other libraries in the region. (Cooperation with the Carnegie Public Library and the University of Pittsburgh has been explored.)[7] Holdings could be microformed and be held in the present space. Advantages of this course include keeping materials close at hand, the relative cheapness of forms in relation to construction and the capability of duplication of forms by photocopy or microfiche reproduction.

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6. From the ALDP charge to the Technology and Facilities Task Force.

7. Herman H. Henkle and Joseph C. Shipman, "Metropolitan Science-Technology Library, Final Report." Pittsburgh, 1973. (Mimeographed.)

It is the opinion of the Task Force that the best possible solution to the space problem is the conversion of journal files to microform. The most acceptable approach would be the conversions of the oldest back runs, with the most recent 10-20 years being kept in hard copy. It is recognized that certain journals in such fields as fine arts and the sciences cannot be microformed successfully because of the nature of their contents. The selection of titles to be converted must be made with care.

Consideration might be given to microforming in-house; the cost should be investigated. It would be necessary to insure good quality control of any item produced. The reader/printer equipment must be chosen with care to provide ease of reading with good quality copies at a reasonable cost. It may be necessary to subsidize the cost of copies for students, which at present is 10¢-15¢, as opposed to the 5¢ charge for photocopies.

The Ad Hoc Committee on the Disposition of Microforms (See Appendix E) has already studied the question of storage and handling. A decision will have to be made between a supervised microform center and mixed storage. Staff will have to be trained in the care and handling of microforms and in the use of the reader/printer.

MICROFORMS IN SYSTEMS

In the dissemination of information, librarians and users should view the microforms as another format and not as a necessary evil. "It is apparent that while the materials in microform are generally consistent with limited usage--- o.p. material, storage, archives, preservation--- the use of them is exceptional; when the materials on microform are of a current and relevant nature, the use of them is broad."[8] The mechanics of retrieval should never overshadow the information to be conveyed: alternate forms of journals (hard copy, microfilm, microfiche), alternate locations (hard copy in one place, microforms in another), variations in format (vertical versus horizontal, different magnifications) all require adjustment by the user and the need to move from one form to another impedes the acquisition of information. "The problems of micrographs are often compounded by half-way measures or, more elegantly, lack of a systems viewpoint...

8. Susan K. Nutter, "User preference studies in microfiche: The M.I.T. Project Intrex and Barker Engineering Library experiences," in Running out of space - What are the alternatives? ed.: Gloria Novak (American Library Association, Chicago, 1978), p. 39.

A first step is for the administration officers to realize that the library faces some difficult problems, especially during the transition phase, and that solution of these problems requires management attention, support and resources beyond those normally allocated to the library."[9]

CURRENT USE

At the present time the library has a limited collection of microforms consisting of out-of-print journals, newspapers, theses, bibliographic tools and government documents. These have been acquired to fill gaps in serial runs, to replace deteriorating volumes, to conserve space or because the material was not obtainable in hard copy. No planned acquisition program has been followed; purchases are made in response to need.

DESCRIPTION OF MICROFORMS

Many configurations of microforms are available as are a great number of readers and reader/printers. Several have been chosen for discussion here because of their popularity, ease of viewing and the availability of the materials in the format. These are 16mm microfilm, 35mm microfilm and fiche. Sixteen millimeter microfilm is available on reel or cassette cartridge. The cartridges may be equipped with magnetic "blips" between film frames, enabling the reader to locate particular articles by just pushing a button. The form (on reel) can often be viewed on the same machines as 35mm. The 16mm format is almost as widespread as 35mm in the availability of journals in the medium. Another advantage lies in the simplicity of operation of the cassette reader/printer. A drawback is the small width of the film which, in the reel form, makes the task of threading the film more delicate. Resolution also decreases as film size diminishes.

The most popular microform now in use is the 35mm reel microfilm. The greatest number of journals microformed are in this form as well. Thirty-five millimeter film is wide enough (1 3/8 in.) to be handled easily and threaded, though, depending on the reader/printer, this can still be a cumbersome ordeal. The linear layout inherent in roll film works well for one sequence of pages. Photocopies may be made from the roll film with varying degrees of contrast and resolution depending upon the quality of the original film, the photocopying

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9. Richard L. Van Horn, "Information Resources - Administrative Issues," Pittsburgh, 1977. (Typewritten.)

process and the idiosyncrasies of the reader/printer.

The usual format for the third microform - microfiche - is a rectangular sheet of film 105x148mm (approximately 4x6 in.) containing microimages arranged in 7 rows and 14 columns for a maximum 98 images fiche. "This American National Standard has been approved by the National Microfilm Association and has been adopted by most micropublishers for many of their publications."[10] An important point to remember in viewing standard microfiche is that the size of the image and the number of images per fiche have been specified without regard to the amount of reduction necessary to fit the image into the 10x12.5mm space. Simply stated, this means that more magnification is needed for larger than standard documents and, consequently, the microformed image will be smaller than life size, presenting reading difficulties. This is a serious drawback and must be considered before purchasing quantities of materials on fiche. Also, large numbers of fiches require closed stacks because of their small size and the ease with which they may be misplaced or misfiled. Once a fiche is located and placed into the reader/printer, a grid is used to locate individual images. Microfiche may be the medium of the future because of its unique characteristics. One capability, Computer Output Microfiche (COM), is produced via a cathode ray image containing computer-generated information. This process bypasses the hard copy and eliminates the problem of variability in image size since the image emitted by the computer is designed solely for viewing on a fiche reader/printer. Microfiche also offers the advantage of cheap duplication of individual fiche onto fiche, as well as photoduplication onto paper. The user may choose to view the fiche at home on his own viewer or make a paper copy for his files. Among other innovations enhancing the future of fiche, the cassette cartridge, containing up to 30 fiches with a capacity of 2,940 images, eliminates the handling of individual fiches. Cassettes may also be indexed externally and viewed via random access push button reader/printers. This, together with the ease of access to title pages, should quell the disappointment of "fishing" for the microform in a box of forms then queuing it into a grid before retrieval of the article searched. Microfiched journals are not widely available commercially, necessitating in-house or local processing of the fiche from hard copy, a problem of quality and cost. More research is needed to explore and weigh the attributes of microfiche.

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10. E. Stevens Rice, Fiche and Reel, (Ann Arbor, Mich.: Xerox University Microfilms, rev. ed., 1972), p. 4.

Another microform, not as widely accepted as those above, is ultrafiche (ultrafiche is defined as any microfiche of magnification greater than 100X.) The limitations of ultrafiche are similar to those associated with a telephoto lens: focusing must be perfect; resolution and contrast must be perfect; there can be no dust or scratches to ultramagnify, and the mechanics of viewing must be precise. So far the form has not met these criteria though the task is not impossible and the form may one day come into its own.

RECOMMENDATION

Microforms are the logical step to maximum utilization of available space. In addition, they allow for permanent removal of information for personal use by means of photocopies and microfiche reproduction. We can best promote their acceptance by studying the state-of-technology to determine the equipment to meet our needs, then implementing the machinery chosen as a complete system, rather than staying with a jerry-rigged collection of inferior readers and reader/printers. The costs associated with funding such a system may be weighed against the university's decision not to build additional library storage facilities.

SYSTEMS

Introduction

The administration of Carnegie-Mellon University is committed to the concept of automated library systems. To introduce such systems into the Carnegie-Mellon University libraries will require long-range planning and guaranteed financial support. Planning is already underway through the A. W. Mellon grant fund; this fund may provide financing for a basic, experimental system, and it is hoped that future support can be obtained through grants from other sources.

Superficial investigation would indicate that sophisticated computer-based systems are not cost effective for small and medium sized libraries. Further study, however, refutes this premise. In order to function in the information world of the future libraries must be automated. It is economically impossible for any one library to satisfy the needs of its users. The solution lies in networking and resource sharing, accomplished through computer linkage. Libraries need machine readable databases to provide catalogs that can be shared.

The LC MARC project represents an early step in this process and the widespread use of such systems as OCLC and BALLOTS demonstrates the viability of the concept.[11]

The advantages to be derived from automation in the internal management of a library are many:

> Storage of hard copy is expensive; building costs are rising and maintenance expenses are high. Microforms and machine readable bibliographic databases do not require much storage space.
>
> While experience has shown that automated systems do not lead necessarily to a need for fewer personnel, it has proved that existing staff can be used more effectively.
>
> Systems provide accurate, up-to-date information for circulation, serials and acquisitions. The database can be manipulated to produce statistics, financial records, claim notices, overdue notices and purchase orders.
>
> Online terminals for use by library patrons result in improved service and good public relations.[12]

It is necessary to weigh the cost of systems. There is no question that the initial investment is high. A complete installation, using a minicomputer, can cost from $75,000 to $100,000. Software can add another $100,000. While the capital expenditure can be spread over several years, there are other costs connected with the use of the system.[13] These include installation, maintenance and service, supplies, telecommunications, and the cost of conversion. A controlled climate must be provided for the minicomputer itself.

The question of staffing must be considered. During the conversion period at least one programmer familiar with library practices will be needed to adapt software packages. This may become a permanent position. Additional full or part-time clerical staff will be necessary to process the paper work. Once the conversion is completed the existing staff can be trained to maintain the records.

With all these factors in mind the Task Force investigated circulation, acquisitions and serials systems and their application to Carnegie-Mellon University libraries. The results of the study follow.

Preliminary Remarks

The Task Force has identified the need to rationalize certain labor-intensive

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11. J. J. Levine and Timothy Logan. Online Resource Sharing: a Comparison of BALLOTS and OCLC. (California Library Authority for Systems and Services, 1977)
12. Paula Dranov. Automated Library Circulation Systems, 1977-78. (White Plains, N.Y., Knowledge Publications, Inc., 1977)
13. A. N. Grosch. "Fourth generation systems for libraries: the marriage of database management systems and on-line minicomputer hardware," Special Libraries 68 (1977) 221-27.

technical processes through automated control of the shelf list and manipulation and utilization of this record in circulation, acquisitions, serials management and cataloging control. The latter has been successfully automated using the OCLC online shared cataloging services, although until May 1978 no attempt had been made to enter retrospective cataloging records (pre-May 1975) into the database. In May 1978 a program of loading the shelf list was begun. Traditionally libraries have been concerned with designing or using specific application routines to expedite any or all of these procedures. However, increased use of computer technology in libraries and the heightened awareness of the potential of such technology have caused dissatisfaction with this approach. Library systems have progressed from the punched-card stage through specific application modules and have finally arrived at sophisticated online interactive systems, described as Data Base Management Systems (DBMS). One reason for dissatisfaction with specific subsystem modules is the duplication of files required to keep each system up-to-date with bibliographic, patron, and fiscal information.

An integrated approach, by minicomputers, permits accessibility to master files for several different functions at one time, limiting the size and duplication of the database. This type of system is located somewhere between specific subsystem modules and a totally in-house designed database management system, and is feasible for the library complex currently in existence in Carnegie-Mellon University. There is no commercially available DBMS for libraries as much of the work is still at the research level (see Ohio State University, University of Minnesota, Washington State Library Network and the University of Chicago).[14] An alternative is to purchase the best subsystems available, with special consideration being given to criteria such as software compatibility and system features (the capability of the system to provide us with the type of services required by our library system) and interfacing each subsystem with domestically developed software, creating an integrated system built to our own specifications.

In its examination of systems and by extensive interviewing, the Task Force has formulated certain minimum standards for inclusion in any automated system. Also, since the Task Force is committed to the principle of an integrated system, it is aware that a schedule of implementation will have to be drawn up.

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14. Charles Payne et al. "University of Chicago data management system," Library Quarterly 47 (1977): 1-22

Systems identified as ripe for automation are acquisitions, circulation and serials control. In considering these issues investigation of the services of OCLC was appropriate. The conclusion reached was that despite extensive and ambitious projections for serials check-in, subject access to the database, acquisitions control and a circulation control system, the Task Force was not convinced that any, or all, of these functions were feasible in the near future. In a recent statement on OCLC future planning approved by the Directors of the OCLC-affiliated networks for presentation to the OCLC Board of Trustees[15], OCLC is described as "deficient in planning and prone to too optimistic implementation schedules which are constantly revised and delayed." Since it is impossible for participating libraries to be given deadlines for new systems and since reservations are being made as to the capability of such a large database to adequately serve such localized functions as serials, circulation and acquisitions control, the Task Force recommends that the library develop its own system for these functions, based on existing packages and interfaced as far as is possible with the current services contracted on OCLC.

Prior to describing system capabilities, it is expedient that the structure of the database be examined.

Database

A major prerequisite to automation is the structure of the database. The library has purchased the archival tapes from the shared cataloging program of OCLC, those containing that portion of the library's acquisitions since May 1975. These tapes constitute a basis for any circulation or acquisitions automated schemes proposed. Pre-1975 shelf list records are still in manual form and would require manipulation, in whole or in part, so that the best use may be made of the database in a fully automated system. There are several approaches that may be employed in transferring the manual record to machine readable form.

It may be decided to deal with the entire collection by simply going through the shelf list and identifying that record with one on the OCLC database, creating a holdings record within the OCLC tapes; where no record exists original cataloging would be entered by means of a workform. Many libraries associated with OCLC have

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15. Pittsburgh Regional Library Center. "Statement on OCLC future planning." Pittsburgh, 1977. (Typewritten)

already loaded their shelf lists, enhancing the basic assets of library cooperation, i.e., shared cataloging and interlibrary loans. Hunt Library has not until now followed suit for a variety of reasons; as it will require an intensive effort, there has been neither the staff nor the time for such a project; additional access to the database will probably require the leasing of an additional OCLC terminal (CRT); there also exists the problem of substandard cataloging information for records prior to 1940, and possibly somewhat later, presenting the need for revision. Given the present state of the library budget this task has been well outside the library's capabilities. The creation of a machine readable database could result in provision of services as:

> Production of the entire catalog on microform or other media for dissemination within the library and to campus locations other than the library.
>
> Publication of select bibliographies.
>
> Availability of the database for use in an online capacity.
>
> File integrity in the various catalogs, manual filing being susceptible to errors.
>
> Reduction in the time spent on pre-order searching.
>
> Facilitation of the deduction and withdrawal processes.
>
> Inventory control and management information regarding the library collection.

An alternative method of loading the shelf list would be to capture the information on a selective basis, such as when an item circulates, building a database representative of the part of the library holdings which circulate, plus all current acquisitions. This is a much cheaper way of proceeding but it does not allow such extensive exploitation of the database simply because of the limitations set by applying circulation as the main criterion of use. By utilizing these archival tapes one would be able to implement the type of operations described above, but on a much less effective scale (e.g. manual and automated files would have to be checked to insure that the entire holdings had been surveyed).

Since the beginning of this study the Technical Processing Department, using present staff, has begun an experimental program to load the shelf list. It is estimated that there are approximately 127,000 titles in the Hunt and Engineering and Science Libraries to be entered. Mellon Institute Ldbrary will

add another 20,000. The initial program will reveal problems encountered, indicate the time needed per entry, and demonstrate staffing and terminal needs. The Task Force visited the Patrick Henry Learning Center of Robert Morris College, where the shelf list was "dumped" without revision. Using their existing terminal, with the help of specially trained students, and with the terminal online at least ten hours a day, it took two years to transfer 70,000 records. Many of these records will require updating as quantity took precedence over quality at the time of the original transfer.

Systems Capabilities

Acquisitions Subsystem

The Technical Processing Department of Hunt Library exhibits an interdependent relationship between acquisitions and cataloging functions, co-existing in a climate of semi-automation. Since 1975 the function of cataloging has been expedited through the services of OCLC Inc., which also provides a means for pre-order searching, a process essential for verification of certain bibliographic elements such as main entry, title, ISBN.

The Task Force is cognizant of the ability of any automated acquisitions scheme to increase the facilities and services already provided by OCLC and to reduce unnecessary and expensive duplication. A stumbling block encountered at this stage has been the reluctance on the part of the OCLC directorship to permit online access for localized functions such as acquisitions. Recent changes in the management structure of OCLC, conferring greater powers on the networks, will undoubtedly affect the amount of input and services users expect.

Examination of the existing manual acquisitions scheme suggests that an automated system must provide at least the information generated by the present system and at most additional services, such as inventory control and instant access to fund status; as far as the Task Force is aware no redundant files are currently produced. The Technical Processing Department is formulating flow charts for the variety of procedures inherent in its manual acquisitions system, providing guidelines for minimum standards in an automated system. Of major importance to the structure and function of all automated procedures, and in particular to automated acquisitions, is the database. An automated acquisitions system, establishing the primary step in information retrieval, should provide a

basis for integration with other functions such as cataloging, circulation and inventory control. The library is committed to the use of OCLC information for acquisitions and circulation. To change vendors at this date would be prohibitively expensive.

Carnegie-Mellon University's OCLC archival tapes constitute a natural starting point in the formation of the database. So far no software has been designed to exploit the information therein. The exclusion of bibliographic information prior to May 1975 has already been discussed and implementation of an automated acquisitions scheme will inevitably be affected by decisions made in respect to this area.

Database and Special Purpose Files for Acquisitions Subsystem

The database files for an acquisitions scheme should include:

Database derived from OCLC archival tapes

Vendor Information and addresses

Funding Information

Operator authorization and security measures

Indicators which transmit to the user the status of an item already in the system, e.g., on order, received, in process.

Search functions: by author, title, subject, ISBN or ISSN, OCLC number, order number, vendor.

An automated acquisitions scheme should accommodate the following procedures:

Online checking of inventory and on-order files, alerting the user as to the status of an item if already in the system, whether fully cataloged or on-order.

Transmission of an order into the system using bibliographic information verified by OCLC (this would be done automatically if the system were directly linked to search OCLC database). Where no verification is available from OCLC manual tools such as the National Union Catalog, Books in Print and Forthcoming Books would be used.

Details transmitted should include: author, title, date and place of publication, publisher, price, OCLC number, ISBN or ISSN, vendor, order number and date of order, fund information, requestor.

Production of purchase orders at prescribed times (daily, weekly, etc.) and transmission to vendor.

Instant accessibility to the status of funds, and production of regular fiscal reports.

Facility to initiate printed claims for specific items and regular notification of overdue items, such as standing orders.

Regular generation of on-order lists, which would replace the filing of slips in the card catalog.

Daily update of the online catalog.

Ability to progress easily from searching mode to other modes within the system, such as initiating orders.

Cataloging Subsystem

Although automated, the cataloging system still requires cumbersome manual procedures, such as the filing of slips in the shelflist and the refiling of slips in the card catalog. Current cataloging procedures would be greatly simplified by the automatic transmission of information from the acquisitions system. An online cataloging scheme would generate less paperwork and the in-process time could be reduced considerably.

The efficiency of the cataloging subsystem, and similarly the acquisitions subsystem, will largely depend on the cooperation of OCLC Inc., permitting individual institutions or networks to use its database meshed with their own local subsystems.

WEBNET

The Task Force has examined the services available through WEBNET (Western Pennsylvania Buhl Network) and it is impressed by the aims and objectives of this type of online resource sharing system:

Cooperative acquisitions

Union catalogs and on-order files

Delivery of materials

Cooperative storage

However, in consideration of the limitations inherent in the system, which is still an experimental program, the Task Force cannot recommend joining the consortium.

Internal reports from library faculty evaluating the WEBNET system have been made available to the Task Force.

BALLOTS

BALLOTS (Bibliographic Automation of Large Library Operations Using a Time-Sharing System) is an online computerized library system developed by Stanford University to provide a wide range of technical processing services. It also provides bibliographic information retrieval, with file access through a variety of indexes designed for use by libraries and library systems of all types. The database is composed of the complete Library of Congress MARC monographic records file from 1972 to date, cataloging records of libraries using BALLOTS, and in-process records from Stanford's acquisitions program. BALLOTS serves over 100 libraries.

The principal advantage of BALLOTS is that it allows subject access to its files. Direct online access is possible.

The Task Force recommends consideration of BALLOTS as an additional resource because of the two features mentioned above. For a comparison of OCLC and BALLOTS features see Appendix O.

OCLC Acquisitions Subsystem

A recent statement, OCLC Acquisitions Subsystem, April 1978, released by the Pittsburgh Regional Library Center explains the services available through OCLC, Inc. No date is given for the implementation of the subsystem and the Task Force is well aware of OCLC's continual revision of schedules. The system described provides the type of services set down by the Task Force and, furthermore, information on those items being purchased by other libraries, a valuable asset within the existing networks of OCLC. Adopting these services would obviate the need to transmit information by means of a minicomputer and it would permit direct use of the OCLC database. The service would be greatly enhanced by the rapid transfer of the shelflist into the database.

At least one additional terminal would be necessary for online access by acquisitions personnel.

Circulation Subsystem

Of all the automated library procedures circulation has attracted the largest degree of commercial interest. Indeed, as the Task Force discovered, there are any number of commercially produced packages, sustaining a healthy competitive attitude,

and providing a wide range of system features.

Faced with such a selection, the Library must consider its particular needs and apply these criteria in an evaluation process. Notwithstanding the variety of turnkey systems and their particular features, a certain amount of software modification will be necessary.

Another consideration is the peripheral equipment concomitant with automated circulation systems. Bar-codes or OCR (Optical Character Recognition) labels are attached to circulating materials and patron identification; these labels are "read" by an optical scanning device when a transaction is made. The more heavily used sections of the library's collection may be bar-coded in a single operation, subsequent coding occurring as an item circulates. The bulk of patron identification, incorporating bar-codes, would be produced at registration with additional provision in the library for off-campus users. As a unique identifier the registration card could be used for other functions in a campus-wide automated system. Research is underway to create an OCR standard, such as printing the ISBN in OCR format on the verso of the title page, eliminating the need for in-house maintenance.[16] An automated circulation system would undoubtedly confer distinct advantages on present services, for both library patrons and personnel. In addition to streamlining the borrowing and discharging procedures, it would eliminate many time consuming manual operations, such as filing, compilation of statistics, keeping up with delinquent accounts, and simplification of inventory checking.

Database and Special Purpose Files for Circulation Subsystem

Patron profiles, on and off-campus, including borrowing privileges.

Bibliographic profiles, created by the OCLC archival tapes and acquisitions subsystem.

Status indicators, to include: on loan, on reference, in reserves, missing, on order, in process, due date, overdue.

"Hold" signal which indicates when a book is reserved and/or when a reader is delinquent.

Operator authorization and security measures.

Manipulation of the database files should provide:

Quick and efficient circulation transactions

Instant accessibility to information on the status of materials.

---

16. The Library Association Record (March 1977) 111.

Production of overdue and reserve notices.

Lists of items on loan to each reader, subject to strict security controls.

Statistical information: weekly, monthly, annual, etc.

Use profiles and collection evaluation.

Inventory checking.

Given the scope of available systems and the limited time and resources at its disposal the Task Force has not attempted to identify any one system which fits Carnegie-Mellon University's needs. Rather it has attempted an overview of extant and developing systems being produced by the following companies:

Computer Libraries Services, Inc.

3-M Company

Systems Control Inc.

Innovated Systems, Dallas

Universal Library Systems

Data Phase Systems

Cincinnati Electronics

For systems specifications see Dranov.[17]

Serials Subsystem

As the primary source of information serials are "the most used and the most bibliographically complex materials in the library."[18] Juxtaposed with prompt provision of such materials is the librarian's concern for accurate inventory records, a prerequisite to good housekeeping. Since the inception of automated procedures librarians have sought liberation from tedious and time consuming manual control of serials records.

Superficially the task seems simple; the majority of serials appear on a regular basis and bibliographical control is advanced.[19] However, closer inspection of the nature of serials reveals myriad problems:

Changes in titles, frequency and subscription rates

Supplementary volumes to a main serial title released at irregular intervals

17. Paula Dranov. op.cit.

18. Richard de Gennaro. "Wanted: a minicomputer serials control system," Library Journal 102 (1977): 878079.

19. H. D. Avram and Richard Anable. "II. The next generation of CONSER," American Libraries 8 (1977): 23-26.

Introduction of new formats, i.e., the separate publication of parts once issued as a complete number.

Irregularity of serial-type publications, such as 'advances in', progress in', etc.

Documentation of indexes, contents, and title pages when published separately.

Late or nondelivery of issues.

These diverse problems and the desire for highly specialized features such as automatic claiming have inhibited the development of automated serials systems. Some notable success has been achieved at the UCLA Biomedical Library[20] and various other institutions are devising systems which may be commercially viable.

Validation of serials records is already available to Hunt Library through OCLC. A serials subsystem would utilize these records in an online capacity, providing instant check-in and updating of material. Following is a description of the database features and procedures.

Database and Special Purpose Files for Serials Subsystems

Bibliographic profiles

Agent addresses

Subscriptions

Search codes (title, ISSN, CODEN, OCLC number, LC number, subject)

Claim candidates file

Bindery file

Discard issue file

Operator authorization

Manipulation of the files should accommodate the following procedures:

Check-in by issue

Automatic claim notices

Subscription due notices

Discard notices for ephemera

Bindery notices

Automatic merging of bound volumes in the holdings statement.

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20. James Fayollat. "On-line serials control systems in a large biomedical library: 1) Description of the system," Journal of the American Society of Information Science 23 (1972): 318-22.

CONCLUSIONS

The Task Force has not formulated specific recommendations for the introduction of computer-based systems in the Carnegie-Mellon University libraries. The commitment to automation has been made and at this writing (April 1978) preliminary studies to determine the direction of the program are being undertaken under the provisions of the A. W. Mellon grant.

The Task Force has, rather, examined the possibilities of various approaches, attempted to define criteria for subsystems, suggested problem areas and estimated total costs, including personnel requirements. The final decisions must be based on in-depth investigations of actual hard- and software, and the way that it can be adapted to the library's specific needs.

AUDIO VISUAL SERVICES CENTER

Background

The Audio Visual Services Center is housed within the Hunt Library and exists as a separate University department, reporting to the Director of University Libraries. Until the summer of 1976 two offices, Teaching Aids and Instructional Television, were located in an adjoining academic building, Baker Hall; they were operated and administered by separate staffs. These services had been allowed to deteriorate over the years; funding was insufficient and staffing problems existed. Within the last two years the activities of these two service centers have been combined into one department, Audio-Visual Services. By September 1978 the management and staff of the Slide Library, now part of the Fine Arts Library, will come under the jurisdiction of Audio-Visual Services.

The move into its present library location and the appointment of a librarian as Director of Audio-Visual Services have resulted in the beginnings of closer ties between Audio-Visual Services and the university library system. A program to upgrade the Center's equipment and facilities is currently in process.

Collections

Audio-Visual Services houses a small collection of instructional materials on deposit from University departments. The largest group within this collection includes 300 educational film titles. Most of the films are at least ten years old,

and little material has been added in the last five years. University users are able to draw on the more substantial film collections at the University of Pittsburgh and the Carnegie District Film Center.

Audio-Visual Services also maintains a current collection of in-house produced audio and video tapes. A catalog of the department's film and video holdings is available within the Center. An investigation into the appropriateness of OCLC for other media cataloging was begun in May of 1978. Audio visual information items including educational and feature film catalogs, free media journals and notices of current media events are also available. The library's partial collection of outdated media indexes is currently housed in the Hunt Library Reference Department. While there is, at present, no Audio-Visual Services budget line for software or print materials, the department has begun to purchase isolated reference sources with miscellaneous funds. These materials as well as any currently deposited departmental media kits are cataloged and listed in the library and Audio-Visual Services card catalogs. Audio-Visual Services-held free journal titles are listed in the library's periodical strip file. An investigation into coordinating the reference services, media index locations and purchases between the library and the Audio-Visual Services seems appropriate.

Facilities and Equipment

The Center has an independent operating budget and functions on a charge-back basis for production, operating and use of audio-visual equipment. Limited facilities and equipment are available for free-of-charge previewing or independent study of instructional media materials within the Center. The set-up of a dedicated audio-visual study area is planned for the Fall of 1978.

Since 1976, an annual E & GO capital equipment allowance has permitted the Center to begin replacement of worn and out-moded equipment.

Audio-Visual Services also houses a small black and white television studio within its facility. Since the area was not originally designed as a studio, additional soundproofing, temperature, light and power controls and control room storage racks are needed. Substantial remodeling in these areas has already been accomplished. The PA systems and wiring in five remote projection booths on the campus are in need of overhaul and, in some cases, replacement. Although Audio-Visual Services was not originally involved in the design or installation of these

systems, it is now responsible for their maintenance and operation. A suggestion to re-design the sound and lighting systems in two of these locations has already been submitted to the University administration.

Although security of audio-visual equipment within the Center and at delivery and pickup points has not proven to be a serious problem because of the security consciousness of the staff and the code stenciling of the equipment, isolated losses do occur. It may, therefore, be appropriate to investigate the costs and coverage of blanket hardware insurance policies and/or the feasibility of implementing a Tattle-Tape chargeout system for the equipment, much like the system now employed at the University of Pittsburgh.

Current and Proposed Services

The Center is prepared to offer media reference service, instruction in the use of audio-visual equipment, and evaluation of hardware and systems specification to the University community. It provides audio and video production support: to document student projects and university events, for the critique of student and faculty presentations, for university public relations and for programmed instruction.

The establishment of a master antenna/CCTV cable system for the campus would extend significantly the accessibility of these instructional materials to campus-wide locations. Preliminary proposals for a pilot cable run connecting Hunt Library with the Graduate School of Industrial Administration have been negotiated. The costs range from $7000 to $14,000. Audio-Visual Services has, in conjunction with local system installers, also investigated the possibility of combining CCTV and security/alarm capabilities for the campus.

The possibilities for extended programmed instruction in industry markets and media consortia are currently being explored. A trial TVI course production and evaluation period will be conducted by Carnegie Institute of Technology and Audio-Visual Services during the Fall Semester of 1978.

A proposal to expand the accessibility of the university's collection of 90,000 fine arts slides through automated subject access is being studied.

An internal research and development grant was awarded in May 1978 for one year of educational experiments with the 6500 Xerox color copier. The grant is shared by Audio-Visual Services and the Art and Design Departments of the College of Fine Arts.

Evaluation

A dedicated area containing hardware-equipped carrels and/or dedicated equipment carts will improve study conditions for audio-visual users.

The cost-effectiveness of discontinuing the department's hardware repair activities in favor of off-campus service contracts will be examined through a one-year trial repair period in 1978-79. The vacated repair room space will be converted to media study space.

Recommendations

The Task Force makes the following recommendations:

1. There should be a continued attempt to share resources and expertise between the libr r and Audio-Visual Services.

2. The physical appearance of the Center should be improved by cosmetic and functional additions such as dedicated equipment carrels, studio soundproofing, et cetera.

3. Library and Audio-Visual Services' media reference collection should be updated, expanded and centralized within Audio-Visual Services.

4. A study to determine the feasibility of campus-wide ordering and cataloging of media materials via OCLC, and the generation of a university media and audio-visual equipment holdings list should be explored.

5. Funds to upgrade the present Audio-Visual Services media collection, to join area film consortia, and to provide for Audio-Visual Services-sponsored video festivals and workshops should be appropriated.

6. A separate learning resource area should be established within Audio-Visual Services and offered as a supervised, free-of-charge facility to the campus.

7. A guaranteed annual budget line for Audio-Visual Services capital expenditures should be establish d and a depreciation schedule set up.

8. The advisability of installing a tattletape security system for audio-visual equipment and/or investing in a hardware insurance program should be investigated.

9. Funding should be found for the installation of an antenna and campus cable system for instructional video distribution.

10. The increased production of video programmed instruction and the joining of media consortia for distribution and marketing should be supported.

11. The utilization of the current slide library collection should be enhanced through computerized subject accessibility.

Katherine Blauer
Stephanie Evancho
Ruth W. Linder
Joan M. Tieman
John W. Tribby
Mary Volk, Chairman

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APPENDIX A

Advisory Committee, Academic Library Development Program
Carnegie-Mellon University

Dr. Thomas Galvin, Dean
Graduate School of Library & Information Sciences
University of Pittsburgh
Pittsburgh, Pa. 15213

Miss Johnnie E. Givens, Executive Director
Southeastern Library Association
P. O. Box 987
Tucker, Georgia 30084

Dr. Robert Kirkwood, Exec. Director
Commission on Higher Education
3624 Market Street
Philadelphia, Pa. 19104

Mrs. Barbara Manchak, Coordinator,
Information Services
Suburban Library System
5807 Dorchester, Chicago, Illinois 60637

Dr. Patrick McCurry, Associate Professor
Department of Chemistry
Carnegie-Mellon University

Dr. David Miller, Associate Professor
History and Philosophy Dept.
Carnegie-Mellon University

Dr. Grady Morein
Office of Management Studies
1527 New Hampshire N.W.
Washington, D.C. 20036

Miss Linda Nanko, Student, C-MU
Chemistry Department

Mr. Michael Olijnyk, Student, C-MU
Department of Art

Dr. Richard Van Horn, Vice President
Business Affairs
Carnegie-Mellon University

Mr. Duane Webster
Association Research Libraries
1527 New Hampshire Avenue, N.W.
Washington, D.C. 20036

Advisory Committee, ALDP
page 2
Carnegie-Mellon University

Mrs. Karla P. Goold, Study Team Chairman
Assistant Librarian, Hunt Library

Dr. John William McCredie, Jr., Vice Provost
Information Services
Carnegie-Mellon University (ex officio)

Mrs. Ruth R. Corrigan, Director
University Libraries
Carnegie-Mellon University (ex officio)

LIBRARY STUDY

FACULTY QUESTIONNAIRE

(Prepare a one-paragraph explanation of the self-study.)

FIRST, LET'S TALK ABOUT YOUR COURSES.....

1. Do any of the courses you teach this semester require use of the library?
   1. Yes_____ 2. No_____

2. If Yes, what library resources do you expect the students to use?

   1. Materials in the Reserve Room _____
   2. Books in the general collection _____
   3. Journals in the general collection _____
   4. Records, tapes or scores _____
   5. Slides _____
   6. Films _____
   7. Reference materials _____
   8. Computerized data bases _____
   9. Something else: What? _____

3. How adequate or inadequate are the present library resources for your courses this semester?

	Very adequate	Adequate	Inadequate
1. Materials in the Reserve Room	_____	_____	_____
2. Books in the general collection	_____	_____	_____
3. Journals in the general collection	_____	_____	_____
4. Records, tapes or scores	_____	_____	_____
5. Slides	_____	_____	_____
6. Films	_____	_____	_____
7. Reference materials	_____	_____	_____
8. Computerized data bases	_____	_____	_____
9. Something else: What?	_____	_____	_____

4. On what do you base your evaluation of the C-HU library resources?

   1. Comparison with other university libraries _____
   2. Personal knowledge _____
   3. Check of card catalog _____
   4. Review of bibliographies _____
   5. General impression _____
   6. Something else? Please explain _____

   _____

   _____.

5. If some of your courses this semester require library resources, please describe the materials used in the course(s). Are they:

   1. Textbooks _____
   2. Books of readings or other books _____
   3. Laboratory equipment or materials _____
   4. Workshop facilities or materials _____
   5. Something else: What? _____

6. Do your courses this semester include any of the following:

1. A list of required readings _____
2. A list of suggested readings _____
3. Informal reading suggestions made during class _____
4. Specific instruction in use of library resources _____
5. Guidance or advice in using library resources such as the catalog, references or librarians _____

7. In general, how adequate or inadequate do you consider the C-MU library resources for your courses. Would you say:

1. Very adequate _____
2. Adequate _____
3. Inadequate _____
4. Not sure _____

8. If you ever found that the library collections did not have what you wanted for courses, did you:

a. Order the materials you wanted? 1.Yes _____ 2.No _____

b. Ask students to buy the books or materials? 1.Yes _____ 2.No _____

c. Direct students to other libraries in the Pittsburgh area? 1.Yes _____ 2.No _____

d. Order books on interlibrary loan? 1.Yes _____ 2.No _____

9. Thinking about the past year (from January 1,1977 until now) have you ordered any materials to be purchased for the library? I mean books, journals, records, slides, films or anything else?

1. Yes, books _____
2. Yes, journals _____
3. Yes, records, slides,tapes,films _____
4. Yes, something else: what? _____
5. No, nothing _____

10. Have you encountered any problems in ordering any materials for the library?

1. Yes _____
2. No _____
3. Not sure _____

11. If Yes, what were these problems? _____.

12. Would it help you in teaching courses, if the librarians offered instruction to students in how to use the library?

1. Yes, by lecturing on specific topics _____
2. Yes, by giving term paper clinics _____
3. Yes, by informing students about library resources _____
4. Yes, something else: what? _____
_____.
5. No, such instruction is not necessary _____

13. Do you ever use microfilm or microfiche materials?

1. Yes _____
2. No _____

Why?
_____.

14. As the library collection grows, we may have a storage problem. Would you be willing to have materials which are rarely used in microform?

1. Yes _____
2. No _____

Why?
_____.

15. Have you any other comments about library services?

_____
_____.

THANK YOU FOR ANSWERING THESE QUESTIONS. I APPRECIATE YOUR HELP. THE REPORT OF OUR SELF-STUDY WILL BE AVAILABLE TO FACULTY IN JUNE (?) 1978.

Appendix B
Faculty Interviews

Thirty-five members of the faculty were selected to be interviewed. It was decided that the interviewees should reflect departmental patterns of library use. To determine what these patterns were, the following method was employed:

1. The departmental reading assignments shelved in the Reserve Book Rooms in Hunt and E & S were checked and the course numbers noted. The current (1977) Fall Class Schedule indicated which instructors responsible for teaching specific courses, had the assignments requiring use of the Reserve collections. The total number of courses offered by a department during the Fall '77 semester was compared with the number of courses taught in the same department that placed materials on Reserve. The departments were ranked by percentage of courses offered that required/recommended use of the Reserve collection. (See chart 1).

2. The faculty circulation records were searched; academic departments were ranked according to the number of circulation transactions made during a six-month period. Within each department, individual borrowers were noted.

3. The list of instructors requiring Reserve Book Room use was compared with the list of faculty borrowers. Wherever these lists coincided, the name of the individual faculty member was underlined, indicating that he should be designated a "high" user of library resources.

4. The academic departments were ranked by units taught (the number of course credits multiplied by the number of students enrolled in the courses); the most recent figures available were taken from the 1976-77 Registrar's records.

5. The above statistics were combined into a chart containing the three departmental rankings: units taught, percentage of courses with reserve assignments, and departmental circulation transactions. (See chart 2).

6. This chart was divided into three sections. Departments located in the upper third were designated "high use departments", the middle third "moderate use", and the lower third "low use". Whenever a department showed

inconsistent rankings, the proper designation of the department was arrived at by discussion within the task force.

7. The number of interviewees allotted to each department was determined by the combined rankings. Very high departments (3) were assigned three interviewees each, medium (10), two, and low departments (6), one each.

8. The interviewees were selected from the list of library users (borrowers - reserve-room assigners). On the suggestion of the faculty advisor to the task force, the interviewees from high- and medium-use departments were middle-level faculty. Library representatives were excluded. It was assumed that senior faculty members and library representatives had ample opportunity to communicate their needs and opinions to the library. Junior faculty members were not selected because of their somewhat tenuous position in the departments. For low-use departments, interviewees were chosen from among senior faculty in order to provide opinions that would reflect the departmental needs and research trends authoritatively.

Interviews were conducted during the month of December 1977 by pairs of library personnel, consisting usually of a task force member and a member of the study team, although it was sometimes expedient for two members of the task force to pair up. The interview format was highly structured; each faculty member was asked the same set of questions, and responses were recorded on the questionnaire by the interview team. Although the questionnaire was followed rather closely, there was a good deal of flexibility in the ordering of the questions.

Chart 1

Department	Units Taught	No. Courses With Reserve Assignments	% of Total Dept. Courses	No. Instructors With Reserve Assignments	Instructors
Economics	11,628	7 (8 Total)	99.9	6	Avery, Dolde, Epple, Holz, Ichiishi, O'Hara
GSIA	24,874	36 (66)	54.5	41	Atkin, Avery, Binstock, Bowman, Charns, Berg, Constantinides, Dolde, Epple, Fitts, Goodman, Flower, Harris, Hodrick, Holz, Jeroslow, Kerr, Kriebel, Kaplan, Love, Joseph, Jacobsen, Pang, McGuire, McKelvey, Morton, Mitchell, Pennings, Prescott, McCredie, Ravio, Redlinger, S.Richard, Romel, Rosenthal, Russo, G.Thompson, R.Thompson, Schipper, Staelin, Townsend
History	23,309	24 (47)	50.0	17	Bartlett, Branca, Cohn, Constant, Fowler, Levy, Hammer, Laudan, Miller, Penna, Phillips, Resnick, Schaefer, Smith, Stearns, Sutton, Weber
Social Relations	1,962	3 (6)	50.0	2	Steuman, Tamimi
Psychology	13,919	20 (43)	46.5	19	Atkin, Chase, Cole, Friedman, Glenn, Carroll, Hayes, Hinsley, Just, Klahr, Langley, Morgan, Makoid, Miczek, Reddy, Sandberg, Scheier, Schulz, Rudnicky
Chemical Engineering	13,874	9 (20)	45.0	9	Anderson, Fort, Li, Massey, Miller, Powers, Prieve, Rosen, Zondlo
SUPA	8,429	11 (25)	44.0	3	Angrist, Devries, Eastman
AMS	17,187	6 (16)	37.5	11	Ball, Baxerman, Mitchell, Schoorman, Kerr, So, Sloan, Raj, Sadok, Winer, Karvinen
Metallurgy and Materials Science	8,425	10 (24)	41.7	8	Laughlin, Massalski, Mullins, Philbrook, Pichler, Dekerka, Sigworth, Thompson
Computer Science	14,400	9 (22)	40.9	10	Erman, Jones, Kung, Milfinger, Paley, Traub, McDermott, Rudaheffer, Siewiorik
Architecture	24,503	16 (40)	40.0	20	Adkins, Burdett, Chang, Chung, Cooper, Eastman, Gensert, Highlands, Levin, Mayo, Oppenheim, Pasquinelli, Porfido, Pohlman, Pena, Rush, Sealman, Taylor, Toker, Wakefield
Physics	24,515	11 (46)	23.9	11	Artman, Ashkin, Engler, Friedberg, Li, Langer, Griffiths, Nagle, Sutton, Wolfstein, Worthington
Statistics	7,921	4 (17)	23.5	3	Davis, Eddy, Shaman
Biomedical Engineering	1,906	5 (18)	27.7	4	Meyer, Sanderson, Stern, Rahill
Design	14,672	10 (45)	22.2	4	Bailey, Byers, DeGregori, Swinehart
Electrical Engineering	21,973	9 (34)	25.2	9	Cassasent, Gherep, Hager, Hoburg, Jordan, Tuma, Mullins, Siewiorek, Stern
Chemistry	16,536	7 (33)	21.2	6	Berry, Carlin, Dadok, Ginat, Richman, Markovitz
Biological Science	3,417	3 (15)	20.0	3	Kauffman, Wolken, Worthington
Nuclear Science and Engineering	2,485	2 (10)	20.0	2	Impink, Boltax
Civil Engineering	9,299	4 (25)	16.0	3	Davidson, Fenves, Luthy

Chart 2

Faculty Library Use by Department

Units Taught		% of Courses With Reserve Assignments		Circulation	
Math	35,844	Economics	99.9	History	903
GSIA	24,874	GSIA	54.5	GSIA	511
Physics	24,515	History	50.0	English	436
Arch.	24,503	Soc.Rel.	50.0	Physics	384
Art	23,905	Psychology	46.5	Math	325
History	23,309	Chem.Eng.	45.0	Arch.	317
Drama	22,717	SUPA	44.0	Drama	255
Elec.Eng.	21,973	Met.& Mat.Sci.	41.7	Elec.Eng.	236
English	20,888	Comp.Sci.	40.9	Comp.Sci.	234
AMS	17,187	Arch.	40.0	Art	225
Music	16,975	AMS	37.5	Chemistry	211
Chemistry	16,536	Bio.Tech.	27.7	Chem.Eng.	209
Design	14,672	Elec.Eng.	25.2	Psychology	209
Comp.Sci.	14,400	Physics	23.9	Bio.Sci.	185
Psychology	13,919	Statistics	23.5	Met.& Mat.Sci.	164
Mech.Eng.	13,899	Design	22.2	Mod.Lang.	154
Chem.Eng.	13,874	Chemistry	21.2	Music	147
Economics	11,628	Bio.Sci.	20.0	SUPA	126
Civil Eng.	9,299	Nuc.Sci.	20.0	Statistics	117
SUPA	8,429	Civil Eng.	16.0	Civil Eng.	115
Met.& Mat.Sci.	8,425	Art	11.1	Bio.Tech.	70
Statistics	7,921	Music	10.5	Mech.Eng.	66
Interdisc.	7,704	English	9.3	Nuc.Sci.	43
Mod.Lang.	6,856	Mech.Eng.	8.8	Design	5
Bio.Sci.	5,417	Drama	5.2		
Other	3,443	Mod.Lang.	2.3		
Nuc.Sci.	2,485	Eng.& P.P.	0		
Soc.Rel.	1,962				

Appendix C.-
Student Users Survey

Population Sample

Questions 1-3 deal with identifying the survey population by discipline, college, and class status. Although no effort was made to insure that the sample reflect the acadmeic composition of the student body, the survey results show a reasonable correlation between the make-up of the sample and that of the student body as a whole.

Chart A

	Library Use	University
CFA	22.0%	25.2%
CIT	37.9%	34.3%
GSIA	11.1%	5.2%
H&SS	12.4%	14.0%
MIS	13.3%	14.0%
SUPA	3.1%	2.2%
OTHER	.3%	0.0%

Chart B

Department	Percentage of Total Responses	
Electrical Eng.	11.5	
Architecture	7.7	
CSIA	6.5	
Chemical Eng.	6.8	
Mechanical Eng.	6.1	
Civil Eng.	5.4	
AMS	4.4	
Art	4.4	
Math	3.9	
MMS	3.7	
Chemistry	3.4	
Design	3.4	
Music	3.4	
SUPA	2.9	
English	2.9	
Physics	2.8	(Probably 3.2, since there was a minor error in coding)
Other (Interdisc.)	2.5	
Psychology	2.4	
Drama	2.4	
History	2.3	
Economics	2.0	
Computer Sci.	1.6	
Biological Sci.	1.4	
95-interdisc.	1.2	
Engineering and P.P.	.9	
Technical Writing	.8	
Biomedical Eng.	.7	
Social Relations	.4	

The distribution of students by class also reflects to some extent the university-wide distribution. (Chart C).

Chart C

	Fresh.	Soph.	Jr.	Sr.	Pt.Time	Grad.
CFA	28.4	28.1	22.7	23.2	28.0	10.1
CIT	36.4	36.5	48.0	40.2	24.0	30.9
GSIA	4.2	7.3	5.2	5.5	0.0	29.1
H&SS	14.7	13.2	13.1	19.7	20.0	4.7
MIS	16.3	14.9	10.8	10.2	24.0	12.6
SUPA	0.0	0.0	0.0	0.0	4.0	12.6
% of Survey Population	18.5	20.2	20.3	15.0	1.5	23.9

The extent to which colleges are either over- or under-represented in the sample is reflected in the difference in study habits, course requirements and research needs among the various colleges. First we will discuss the responses to the questions. Where the pattern of response shows a significant difference from the pattern of college representation in the sample population or in the university student body, this will be noted as a phenomenon requiring closer investigation. The colleges will be considered within the context of general library usage. At a later point, each college will be profiled and analyzed separately.

A further observation on the sample population: Note that 23.9% of this sample is composed of graduate students. Almost one quarter of the student body using the library are students whose library needs ought to differ considerably from the body of undergraduates who also use the library. What are the library's goals in providing for the needs of graduate students? How does the collection development policy of the library accommodate the interests of this group?

Questions 4-15 deal with the use of particular collections and materials.

Question 4 :

The following charts are offered as a supplement to the information noted on the questionnaire sheet. The users of each of the three campus libraries are analyzed by class status and college affiliation.

Chart D

Status	Hunt	E&S	Mellon
Fresh.	70.6%	29.4%	0.0%
Soph.	70.2	29.5	1.7
Jr.	59.5	38.0	.4
Sr.	63.8	35.8	.4
Special	60.0	40.0	0.0
Grad.	59.4	38.9	1.7

Chart E

Library	Fresh.	Soph.	Jr.	Sr.	Special	Grad.	Other
Hunt	20.3%	22.1%	18.8%	14.9%	1.4%	22.1%	0.6%
E & S	15.6	17.1	22.5	15.4	1.7	26.6	1.2
Mellon Inst.	0.0	6.7	40.0	6.7	0.0	46.7	0.0

Chart F

College	Hunt	E&S	Mellon
CFA	32.4%	3.4%	0.0%
CIT	22.4	67.4	0.0
GSIA	15.6	2.7	0.0
H&SS	17.8	2.7	6.7
MIS	8.0	20.9	93.3
SUPA	3.4	2.5	0.0

Question 5 : Time of day/Day of week

Although students misunderstood this question and responded to it by referring to a past library visit, there is a fairly accurate record of library use by time of day, weekday vs. weekend use. The sampling technique was based upon a count of users taken at various times over the course of a week; the library controlled the number of survey questionnaires that that could be distributed in any particular time slot in order to insure a properly representative sample. The following are

probable distribution percentages:

Between 8 AM and 5 PM, weekdays	60%
After 5 PM, weekdays	25%
Weekends	15%

Unfortunately, since the survey figures are inaccurate, a reasonable correlation between library activity and time could not be established. However, students did offer comments regarding the library hours and services which may be taken as an indication that there are problems for students who use the library after 5 PM and on weekends. At least 35 students requested that library hours be extended and that reference assistance be available at these times. At least 10 students remarked that they needed assistance in using the library during the evenings and on weekends.

Question 6 : Purpose of visit to library

Although the greatest number of positive responses was to the subquestion study/homework, 43.5%, almost two-thirds, 63.6% answered affirmately to subquestions 1-3, indicating that they had made use of library materials during the course of their visit. Study/homework does not exclude the use of library materials; it might have been more useful to specify study/homework with own materials. There is a certain amount of evidence, however, that a great many students do use the library as a study-hall facility. For example, if one examines Chart F above, one will see that a certain percentage of students from each college use each of the campus libraries. Each of the campus libraries houses collections which are distinctive in subject coverage. Students at CMU enroll in classes in departments outside their majors, of course, but the trend at this institution is to declare a major quite early on, if not at entrance. We might reasonably expect that students will use the library that houses the materials related to their course of study. CIT students are a considerable element among the users of Hunt Library, 22.4%. From Chart G below we note that CIT is disporportionately representated among those positive

respondents to homework/study. Furthermore, among the sample taken at E&S Library, 51.2% responded affirmatively to that question. On the basis of this information, we might make a tentative statement that students of CIT use the library heavily for study, often with their own materials. Comments concerning the E&S Library indicate that it is crowded and noisy. Are there too many persons sitting in the E&S Library who are engaged in study or some other activity which does not involve the use of library materials? This should be thoroughly investigated because space for the book and journal collection is a serious issue. If valuable library space is being used for nonlibrary purposes, this situation should be brought to light and a remedy sought.

Chart G

Total positive responses to catagories of use - departmental share of total positive responses

	Assigned Reading(315)	Research(471)	Reference(445)	Study(739)	Music(50)	Leisure	Other
CFA	18.4 (58)	35.0 (165)	22.2 (99)	11.2 (83)	72.0 (36)		
CIT	32.1 (101)	31.0 (146)	34.8 (155)	46.1 (341)	10.0 (5)		
GSIA	13.7 (43)	6.2 (29)	9.2 (41)	13.3 (59)	0.0 (0)	Insignificant Number of Responses	
H&SS	20.6 (65)	12.5 (59)	13.3 (59)	12.3 (91)	8.0 (4)		
MIS	10.2 (32)	10.6 (50)	17.3 (77)	13.9 (103)	10.0 (5)		
SUPA	5.1 (16)	4.0 (19)	2.9 (13)	3.0 (22)	0.0 (0)		

	Assigned Reading
CIT	32.1
H&SS	20.6
CFA	18.4

Question 7 : Materials sought

The distribution of responses are not surprising. Chart H supplies information on departmental use of library materials. From this chart, it can be seen that CFA, which comprises 22.0% of the sample population, accounts for a very high percentage of all the users of non-print materials, records, prints/slides, and tapes, and also copying machines. GSIA, H&SS, and SUPA are over-represented in the use of government documents. The SUPA sample were under-represented among book users. (Note that these figures do not refer to the percentage of use of certain materials within individual colleges, but indicate

only a share of the total use of that material within the library as a whole.)

Chart H

Departmental use compared to total use of types of materials

	Books (507)	Journals (484)	Government Materials (85)	Records (56)	Prints (22)	Tapes (18)	Microfilms (29)	Newspapers (133)	Copying Machines (15
CFA	28.6 (259)	21.9 (106)	14.1 (12)	57.1 (32)	72.7 (16)	88.9 (16)	17.2 (5)	24.5 (38)	33.1 (5.
CIT	34.7 (315)	34.9 (169)	30.6 (26)	19.6 (11)	13.6 (3)	0.0 (0)	31.0 (9)	31.0 (48)	32.5 (51)
CSIA	7.7 (70)	12.6 (61)	15.3 (13)	1.8 (1)	4.5 (1)	0.0 (0)	13.8 (4)	16.8 (26)	6.4 (10)
H&SS	13.8 (125)	13.2 (64)	16.5 (14)	12.5 (7)	9.1 (2)	0.0 (0)	31.0 (9)	19.4 (30)	15.9 (25)
MIS	13.3 (121)	13.2 (64)	4.7 (4)	7.1 (4)	0.0 (0)	11.1 (2)	6.9 (2)	7.1 (11)	10.2 (16)
SUPA	1.7 (15)	3.5 (17)	18.8 (16)	1.8 (1)	0.0 (0)	0.0 (0)	0.0 (0)	1.3 (2)	1.9 (3)

Questions 8-9 : Search strategy

It is useful to compare the responses to this set of questions with the statements made by members of the faculty during interviews concerning their expectations of students in using the library. One should also refer to the charts ranking the various academic departments according to their use of the reserve collections. CFA is disporpotionately and highly represented among the users of the card catalog and was under-represented in the sample responding affirmatively to use of the reserve collection. Most of the CFA departments, Architecture being a notable exception, were ranked low or middling by reserve criteria. The use of the reserve room to meet library needs seems to be heaviest in H&SS. This is supported by departmental data and by statements made by H&SS faculty during their interviews. All the H&SS faculty queried said that they had required readings for their courses; it is reasonable to suppose that they expected their students to use the reserve collection to satisfy some of these requirements.

Only 21.8% of the students sampled claimed that they had asked either a reference librarian or a circulation desk librarian for information in question 8. Yet the response to question 9 shows that 29-1% needed assistance. The following is a breakdown of the first four subquestions by library:

Chart I

	Hunt	E&S	Mellon Institute
Card catalog users	62.8%	59.1%	26.7%
Browsers	19.9	23.8	13.3
Index users	16.4	18.1	60.0
Reserve users	17.4	19.6	13.3
Asked reference librarian	17.4	10.1	0.0

In noting the search strategies employed in the various libraries, it is useful to refer back to Chart E which characterizes the population of each library by class level. For example, MI users are mostly juniors or higher - 93.4%; in E&S upper classmen and graduate students comprise 63.3% of the sample; in Hunt, 59.8% are upper-level students. A higher percentage of Hunt users asked the reference librarian for assistance than did the users of the other facilities. (See Chart I_2.) A very high percentage of Mellon users consulted periodical indexes; a relatively low percentage of that sample browsed. It is not clear whether or not a legitimate correlation can be made between class level and search strategy. In general, however, Mellon Institute users seem more self-directed, although the sample taken there was so small (15%) that one really cannot generalize.

Chart I_2

Reference requests

	Hunt	E&S	Mellon Institute
% of patrons in <u>that</u> library requesting reference assistance	32.9%	22.8%	6.7%
% of <u>all</u> requests for reference assistance	72.4	27.4	.2

<u>Question 10 : Requests for assistance</u>

Almost as many needed assistance in using periodicals as did in using books, despite the fact that almost twice as many users were looking for books. A slightly greater number of

students admitted to needing help with government documents than the number who stated that they had come to the library with the purpose of using these documents. (Did all the users of government documents require assistance in locating them?)

Question 11 : Success with materials

The adjusted frequency is given, rather than the absolute frequency, since "No Response" indicates a lack of involvement with materials. As a group, the non-book materials - records, prints/slides, tapes, mocroforms had the highest rate of non-success. Government documents also had a high percentage of users reporting a lack of success.

Question 12 : Reason for lack of success

Only subquestion 2 can be assumed to be true because it requires intervention and confirmation by the library. The answers to the other subquestions were probably given truthfully,but there is no supporting correlation between these answers and actual requests for assistance.

Questions 13-14 : Library instruction; frequency of library use; status of library users

The least experienced students, freshmen, expressed the most interest in library instruction. However, there was also a strong positive correlation between frequency of use and interest in instruction. Desire for instruction was expressed in terms of general needs; there was not strong support for programs specifically geared to course work. (See Charts J,K,L)

Question 12 : One most characteristic use of library

The task force decided to eliminate this set of responses since it did not add useful information to the survey data.

Chart J

Library instruction desired by class status

	Fresh.	Soph.	Jr.	Sr.	Grad.
Lectures - on specific topics	10.2%	11.4%	7.3%	9.4%	8.4%
Term Paper Clinics	18.5	13.2	7.8	9.4	4.0
Library Resources	29.6	35.7	35.2	40.2	35.3
Something else	3.2	3.2	4.9	4.7	4.7
Not needed	34.5	40.6	44.8	42.5	49.3

Chart K

Library instruction desired by frequency of use

	Once a month	Twice a month	Once a week	2-3 Times a week	4+ Times a week
Lectures - on specific topics	8.0%	8.0%	7.0%	9.6%	10.8%
Term Paper Clinics	13.8	6.4	8.2	10.4	11.4
Library Resources	26.4	31.2	35.4	38.6	39.0
Something else	3.4	5.6	4.1	4.0	4.3
Not needed	42.5	45.6	48.1	47.3	41.7

Chart L

Frequency of use

	Once a month	Twice a month	Once a week	2-3 Times a week	4+ Times a week
CFA	31.0%	24.8%	25.6%	21.9%	17.9%
CIT	36.8	36.0	37.7	40.5	35.9
GSIA	6.9	10.4	7.3	10.5	14.8
H&SS	12.6	10.4	12.0	11.5	13.9
MIS	10.3	15.2	13.9	12.9	13.2
SUPA	2.3	3.2	2.8	2.3	4.2

UNIVERSITY LIBRARIES, CARNEGIE-MELLON UNIVERSITY

STUDENT LIBRARY SURVEY

The library staff is making a study of library use by students. You can help by answering a few questions.

1. What is your major field? _____ [ ]

2. What is your college or school?

22.9	1. CFA	[ ]
37.9	2. CIT	[ ]
11.1	3. GISA	[ ]
12.4	4. H&SS	[ ]
13.3	5. MIS	[ ]
3.1	6. SUPA	[ ]
.3	7. Other	

3. What is your status at C-MU?

18.5	1. Freshman	[ ]
20.2	2. Sophomore	[ ]
20.3	3. Junior	[ ]
15.0	4. Senior	[ ]
1.5	5. Special or part-time student	[ ]
23.9	6. Graduate student	[ ]
.8	7. Other: what?	[ ]

_____

4. In which of the University Libraries do you get this questionnaire?

64.1	1. Hunt	☐
34.9	2. Engineering and Science	☐
.9	3. Mellon Institute	☐

5. What was the time of your last visit to this library?

60.0	1. Between 8 AM and 5 PM on a weekday	☐
31.2	2. After 5 PM on a weekday	☐
8.4	3. On a Saturday or Sunday	☐

6. What was the purpose of your last visit to the library?

62.6	1. To read assigned course material	☐
	2. To seek materials for a research project	☐
24.2	3. To use reference materials	☐
43.5	4. To study or do homework	☐
2.9	5. To listen to music	☐
7.4	6. For leisure reading	☐
1.6	7. Something else: what?	☐

_____

7. What type of materials were you looking for?

68.4	1. Books	☐
28.5	2. Periodicals	☐
5.0	3. Government documents	☐
3.3	4. Records	☐
1.3	5. Prints or Slides	☐
1.1	6. Tapes	☐
1.7	7. Microforms	☐
9.1	8. Newspapers or news/magazines	☐
9.3	9. Copy machine	☐
23.4	10. Nothing specific	☐

8. Thinking back over your last visit to the library, how did you conduct your search for the materials you wanted?

64.7	1. Use of the card catalog	☐
17.4	2. Search of periodical indexes	☐
21.2	3. Browsing through stacks	☐
18.1	4. Use of Reserve Room materials	☐
14.7	5. Asked Reference librarian for information	☐
7.1	6. Asked circulation desk librarian	☐
5.1	7. Some other way: how?	☐

9. Did you need help from a librarian in locating the materials you wanted?

1. Yes ☐ 29.1
2. No ☐ 70.5

10. If you need help, for which materials did you need help? [29.1% of 29.1%)

1. Books ☐ 12.8
2. Periodicals ☐ 10.6
3. Government documents ☐ 5.4
4. Records ☐ 1.8
5. Prints or Slides ☐ .9
6. Tapes ☐ 1.1
7. Microforms ☐ 1.4
8. Newspapers or news/magazines ☐ 1.6
9. Copy machine ☐ .8
10. Nothing specific ☐ 1.2

11. Were you successful or unsuccessful in locating the materials you wanted?

Adjusted frequency - excludes ∅ response

	Mostly Successful	Partly Successful	Unsuccessful
	59.9	32.2	7.9
1. Books	1	2	3
2. Periodicals	1	2	3
3. Government documents	1	2	3
4. Records	1	2	3
5. Prints or Slides	1	2	3
6. Tapes	1	2	3
7. Microforms	1	2	3
8. Newspapers or news/magazines	1	2	3
9. Copy machine	1	2	3
10. Nothing specific	1	2	3

12. If you were unsuccessful in finding something, why was it?

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1. The material is not held by the CMU library ☐ 27.3
2. The material is in circulation ☐ 13.1
3. The material could not be found ☐ 14.7
4. Some other reason: what? ☐ 4.4

_____

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13. Would you find it useful to have special instruction in using library resources?

57.1% affirmative

1. Yes, lectures on specific topics ☐ 9.5
2. Yes, term paper clinics ☐ 10.1
3. Yes, by information about library resources ☐ 36.8
4. Yes, something else: what? ☐ 4.7

_____

5. No, such instruction is not necessary ☐ 42.4

14. About how often do you use the library?

1. Once a month or less ☐ 5.2
2. Twice a month ☐ 7.9
3. Once a week ☐ 18.7
4. [illegible] or three times a week ☐ 35.9
5. Four or more times a week ☐ 32.8.

15. Thinking back over your use of the library since the Fall semester began in September. Which one of the following best describes your usual use of the library?

1. To read assigned course material ☐ 18.9
2. To seek materials for a research project ☐ 26.1
3. To use reference materials ☐ 13.1
4. To study or do homework ☐ 36.3
5. To listen to music ☐ 1.9
6. For leisure reading ☐ 3.9
7. Something else: what? ☐ 1.3.

_____

16. Have you any other comments about library services or about this questionnaire?

_____

_____

_____

_____

_____

_____

_____

_____

_____

THANK YOU FOR ANSWERING THESE QUESTIONS.

Q2/Q7

College/Materials Used - College Comparisons

	CFA (373)	CIT (643)	GSIA (188)	H&SS (211)	MIS (225)	SUPA (62
Books	69.4(259)	49.0(315)	37.2(70)	59.2(125)	53.8(121)	28.8(15)
Journals	28.4(106)	26.3(169)	32.4(61)	30.3(64)	28.4(64)	32.7(17)
Government Materials	3.2(12)	4.0(26)	6.6(13)	6.6(14)	1.8(4)	30.8(16)
Records	8.6(32)	1.7(11)	0.5(1)	3.3(7)	1.8(4)	1.9(1)
Prints/Slides	4.3(16)	0.5(3)	0.5(1)	0.9(2)	0.0(0)	0.0(0)
Tapes	4.3(16)	0.0(0)	0.0(0)	0.0(0)	0.9(2)	0.0(0)
Microfilms	1.3(5)	1.4(9)	2.1(4)	4.3(9)	0.1(2)	0.0(0)
Newspapers	10.2(38)	7.5(48)	13.8(26)	14.2(30)	4.9(11)	3.8(2)
Copying Machines	13.9(52)	7.9(51)	5.3(10)	11.8(25)	7.1(16)	5.8(3)
Nothing Special	11.3(42)	29.2(188)	27.7(52)	19.9(42)	28.0(63)	17.3(9)

Q2 / Q9

College / Requests for Assistance

	CFA (373)	CIT (641)	GSIA (186)	H&SS (210)	MIS (225)	SUPA (50)
Asked for Assistance	30.3(113)	24.2(155)	40.9(76)	37.1(78)	22.2(50)	44.0(22)

Q9 / Q2

Requests for Assistance / College

	CFA	CIT	GSIA	H&SS	MIS	SUPA
% of Total Requests	22.9(113)	31.4(155)	15.4(76)	15.8(78)	10.1(50)	4.5(22)

Q2 / Q13

College / Library Instruction

	CFA	CIT	GSIA	H&SS	MIS	SUPA
Not Necessary	40.8	40.1	54.3	37.4	50.9	38.5
Necessary	59.2	59.9	45.7	62.6	49.1	61.5

Q2 / Q11

College / Materials Located

	Successful	Mostly Successful	Unsuccessful
CFA			
Books	49.3	38.8	11.8
Journals	53.1	38.5	8.4
Government Materials	28.6	47.6	23.8
CIT			
Books	65.1	28.6	6.3
Journals	56.4	34.5	9.1
Government Materials	31.3	30.0	38.8
GSIA			
Books	57.0	32.2	10.7
Journals	59.4	30.2	10.4
Government Materials	46.3	36.6	17.1
H&SS			
Books	62.0	29.5	8.4
Journals	52.4	33.0	14.2
Government Materials	24.1	48.3	27.6
MIS			
Books	61.0	31.7	7.3
Journals	56.6	36.1	7.2
Government Materials	25.0	66.7	8.3
SUPA			
Books	42.3	38.5	19.2
Journals	27.8	50.0	22.2
Government Materials	15.5	11.3	5.5

Carnegie-Mellon University

INTER-OFFICE CORRESPONDENCE

To: Ruth Corrigan, Director of Libraries

From: Ann de Klerk, Head, Engineering & Science Library

Date: July 6, 1977

Subject: Use studies and other factors to be considered when reviewing journals for retention or cancellation

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From May 1975 - April 1976 a periodical use study (description attached) was conducted in the Engineering & Science Library. Uses of all titles were recorded. An additional 6-month study of current titles was conducted from May to December 1976 (description attached).

To analyse the results of the year long study, a random sample of 100 titles was taken from the approximately 850 currently received titles. It reveals that a high percentage of total use is accounted for by relatively few journals (see figures attached). This type of usage pattern is confirmed by other studies, such as those conducted by Rice (1) and Chen (2).

The random sample indicates how many uses constitute a high level of use in the Engineering & Science Library. Lists of journals in descending order of use have been prepared by subject. A list of all journals in descending order of use is also available.

Use and citation studies should be used with caution (see Kriz (3)). Level of use is only one factor in a decision to retain or cancel. One might be tempted to discard or discontinue all titles which show relatively little use. However, there are several other significant factors which must be considered before such decisions are made. The use study can help by pinpointing the lesser used journals. Those with high use would obviously be retained.

Factors to be considered:

1) Is the journal a <u>specialist journal</u> needed by even a very few people on a research project? If so, this journal must be available on site.

2) Is the journal <u>unique</u> in the Pittsburgh area? If so, we should retain, especially if we expect other colleges to reciprocate by making sure at least one subscription to an important journal is available in the vicinity.

3) What is the density of use? If a relatively low use is recorded but the journal is only 5 years old, as compared to another journal 15 or 30 years old, that low use might still be significant (see Line (4)).

4) What is the impact factor ranking in the Journal Citation Reports? (5) I believe this is much more significant than the basic citation count ranking.

5) Is the journal indexed in the abstracting and indexing tools? If not, retention might be contraindicated.

6) Is the journal in an area in which we expect to become active again, especially if we have a long run of the journal?

The only category of journal which I believe could readily be cancelled, as supported by the 6-month current periodical study, is the newsy trade periodical published in a foreign language.

I am greatly indebted to Dr. Gordon Lewis for his advice, and for the attached representation of use levels.

References

1) Rice, Barbara A. "Periodical Use Study: A Preliminary Report." 1976. (Unpublished paper)

2) Chen, C. "The Use Patterns of Physics Journals in a Large Academic Research Library." American Society for Information Science. Journal. 23, 1972, p. 254-265.

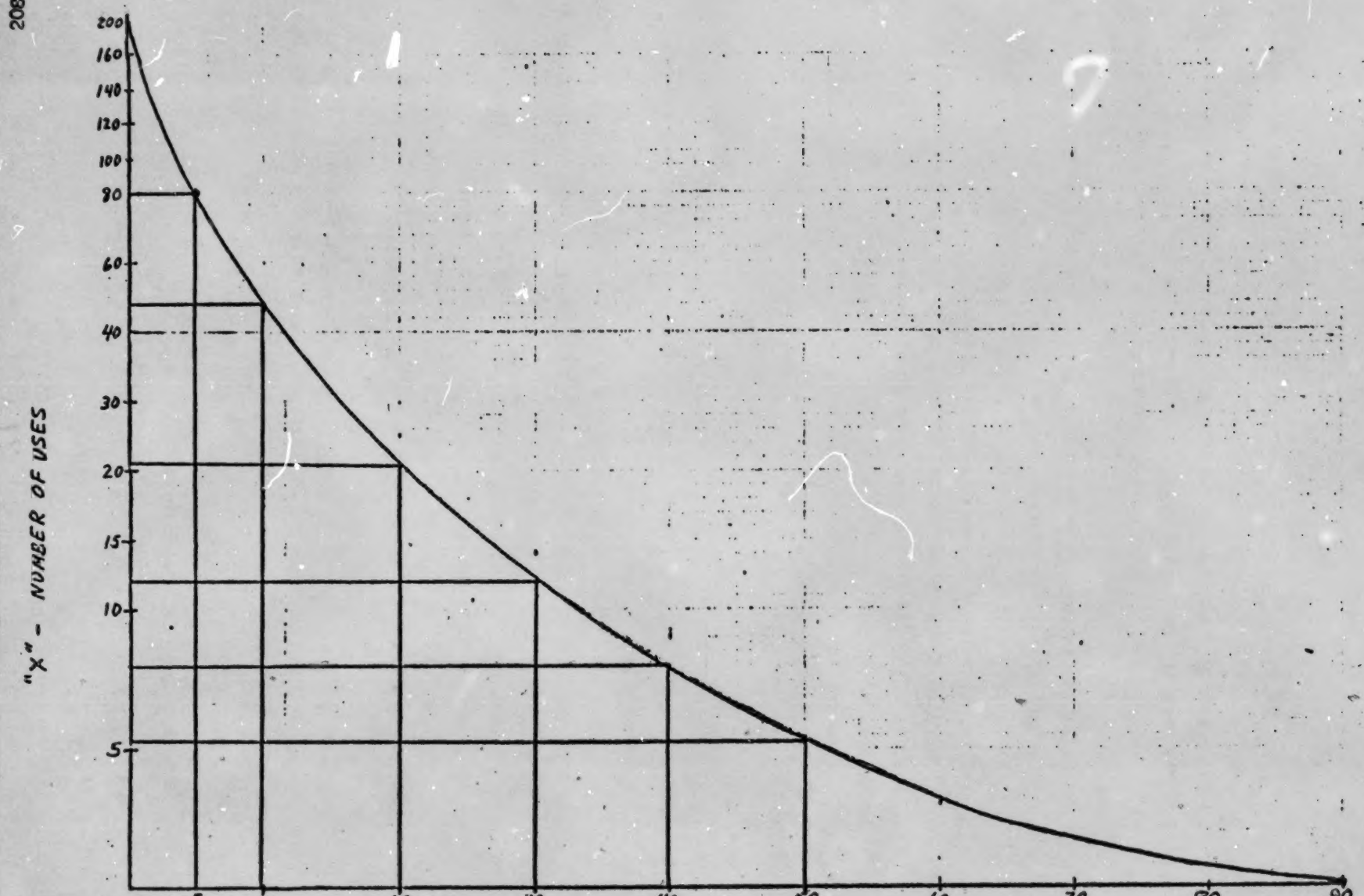
3) Kriz, H. M. "Citation Counting and the Future of Engineering Libraries." Engineering Education. Vol. 67, 1977, p. 707-710.

4) Line, M., and Sandison, A. "Practical Interpretation of Citation and Library Use Studies." College and Research Libraries. Vol. 36, 1975, p. 393-396.

5) Garfield, E., ed. Science Citation Index. 1975 and 1976 Annuals vol. 9. Journal Citation Reports. Philadelphia, Institute for Scientific Information, 1976, 1977.

3 Attachments: Figures 1 and 2
Description of Use Studies

FIGURE J



213

214

Figure 2

Random Sample of 100 Currently Received Titles

Rank	Uses	Σ Uses	Σ %	Rank	Uses	Σ Uses	Σ %
1	193	193	11.7	51	5	1560	
2	116	309	18.8	52	5	1565	
3	99	408	24.8	53	5	1570	
4	90	498		54	4		
5	80	578		55	4		
6	77	655		56	4		
7	72	727		57	4		
8	66	793		58	4	1590	
9	55	848	51.6	59	3		
10	46	894		60	3		
11	45	939		61	3		
12	35	974		62	3		
13	30	1004		63	3		
14	30	1034		64	3		
15	29	1063		65	3	1611	
16	28	1091		66	2		
17	28	1119		67	2		
18	26	1145		68	2		
19	25	1170		69	2		
20	25	1195		70	2		
21	24	1219		71	2		
22	21	1240	75.4	72	2		
23	19	1259		73	2	1627	99.0
24	19	1278		74	2		
25	19	1297		75	2	1631	
26	18	1315		76	1		
27	17	1332		77	1		
28	15	1347		78	1		
29	15	1362		79	1		
30	14	1376		80	1		
31	14	1390		81	1		
32	13	1403		82	1		
33	13	1416		83	1		
34	13	1429		84	1		
35	11	1440		85	1		
36	11	1451		86	1		
37	10	1461		87	1		
38	10	1471		88	1	1644	
39	10	1481	90.1	89	0		
40	9	1490		90	0		
41	8	1498		91	0		
42	8	1306		92	0		
43	7	1513		93	0		
44	7	1520		94	0		
45	7	1527		95	0		
46	6	1533		96	0		
47	6	1539		97	0		
48	6	1545		98	0		
49	5	1550		99	0		
50	5	1555		100	0		
						1644	

DESCRIPTION OF PERIODICAL USE STUDIES

From May 1975-- April 1976 a periodical use study was conducted in the Engineering & Science Library. All journals, bound and unbound, whether charged out or left on tables in the library, were recorded by title before shelving. If a title was used twice or more in the same day it was recorded once only. In addition, it should be noted that some users may have re-shelved their own journals. 100 random samples were taken from the titles still being currently received. The journal most used was Science (203 times). The charts show the percentage of journals that receive at least "x" uses.

SIX MONTH CURRENT JOURNAL STUDY MAY 1975 - DEC. 1975

For six months, as each current issue came in it was sealed with a small strip of gummed paper. This seal could readily be broken when the journal was consulted. If none of the current issues were used during the six-month period this could constitute one factor in the decision to discontinue a title. So far, we have not discontinued any titles on this basis, but we have revised our protection decisions based on this study.

APPENDIX E

FINAL REPORT
OF THE
AD HOC COMMITTEE
ON THE DISPOSITION
OF MICROFORMS

October 14, 1977

Myrtle Nim
Joan Tieman
Earl Mounts, Chairman

In theory, in an open stacks situation, all materials dealing with a particular subject area should be shelved together; however, the reality of space does not allow this arrangement. It is impractical to interfile microforms with books since single sheets of microfiche or boxes of microfilm could be easily lost or misplaced. It is also not feasible to place the libraries' small number of machines throughout the libraries and, likewise, the libraries do not have the personnel necessary to constantly maintain machines and microforms dispersed throughout the library buildings. The libraries' collections of microforms should be located in a central area with machines for reading and copying in as close proximity as possible. This is the most efficient method for handling microforms since both the microforms and the machines can be easily maintained if they are in a single location. Therefore the Committee recommends that all microforms and microform equipment owned by the libraries be placed together in a single designated area in each respective library.

The central location of microforms has ramifications in the directions of cataloging, classification, processing, and circulation procedures. The cataloging of microforms should be as extensive as that applied to monographs and journals since it is the responsibility of the libraries to provide as much access to their materials as possible. And, since the microforms will be in a location apart from the main collections, this is even more advisable. Therefore, the Committee recommends that, with respect to cataloging microforms, the same procedures and policies as are now applied to bound materials extend to their microform counterparts. For example, any decisions, such

as the necessity of providing analytics for microform sets, should be as carefully considered as for bound sets. Or, if a government document is considered important to have a classification other than that as assigned by the producer, then it should be separated from the government document numbered series. In addition, with respect to the cataloging of microforms, since microforms will not be placed in the main collections, the records maintained for them should reflect this separation. For example, if a particular serial is held in hard copy and microform, there should be a separate continuation card for each format. This is especially desirable in the instances when the libraries retain both the hard copy and the microform, as with some technical reports.

The method of classification of microforms was discussed at length by the Committee. It was finally decided that, contingent upon the fact that the microform collections will be centralized and separated from the main collections, classification by Dewey is unnecessary. After surveying the libraries' present holdings in microform, the Committee found that the majority of microforms have a built-in classification. For example, the NASA microfiche have a distinctive numbering system; likewise, advances and other titles of a serial nature can be arranged by their titles and distinctive numbers. As to monographic sets reproduced in microform, these are usually numbered and given a collective title. The NTIS microfiche is also numbered and can easily be filed by its number. With these examples in mind, the Committee proposes the following method for organizing the microforms collections. An important consideration in devising the following classification scheme is that the classification indicator should be

as brief as possible so that it can be conveniently placed on any microform.

First the microform will be identified as to form using the following indicator:

MFL -- microfilm

MFC -- microfiche

MPT -- microprint

MCD -- microcard

UFC -- ultrafiche

Second, the microform will be identified as to its corresponding bound counterpart using the following indicator:

M -- single-title monograph or monographic series not analyzed

S -- monographs in an analyzed series

J -- serials including journals and newspapers

R -- reports

TP -- Ph.D. theses

TM -- Masters' theses

TD -- Doctor of Arts theses

In certain cases, as illustrated below, an accession number may be added to this indicator. Third, if necessary, the item will be identified by its distinct number as supplied by the producer.

To fully illustrate this scheme, we provide the following examples:

Single-title monographs or monographic series not analyzed

MFC
M-4

This indicates a single-title monograph or a multivolume set in microfiche which is not analyzed. The number is an arbitrary accession number used to facilitate locating the item.

Monographs in an analyzed series

MCD
S-7
no.23

This indicates a microcard edition of a multivolume set of which this particular item is number 23. The number 7 is here again an arbitrary accession number identifying the title.

Serials including journals and newspapers

MFL
J

This indicates the microfilm edition of a journal or newspaper. No accession number is needed here since these items will be arranged alphabetically by their main entries.

Reports

MFC
R

This indicates a report series in microfiche. As with serials, these will be arranged alphabetically by the main entry.

Theses

These will be arranged alphabetically within each area by the main entry and their indicators will be as follows:

MFL TP	MFL TM	MFL TD

Processing of the microforms presents special problems since it is not possible to easily assign defined procedures which will apply to all microforms. However, it is necessary to identify in some way the ownership of the various microforms, and the Committee makes the following recommendations. Reels of microfilm have sufficient leads to allow identification. The lead of a reel of microfilm can be perforated with an appropriate identifying mark and the accompanying container can be stamped with the libraries' property stamp now in use. In a similar manner, sheets of microfiche can be punched at the top edge with a distinctive geometric symbol representing each library and the envelopes which hold them can be stamped with the libraries' property stamp. There are available paper punches with distinctive shapes and these could be obtained at a very reasonable price. Microcards and other microopaques can be stamped with the libraries' property stamp on the blank side. In order to attach the classification indicator to microfiche, the indicator can be typed on a small strip of white paper which can then be placed on a piece of clear Magic-Mend tape. The tape is then placed on the top of the microfiche and folded over the back of the microfiche to secure it. Microfilm can be identified in the same manner, if necessary, using the lead as the place for identification. We do not recommend typing the classification indicator on the microfiche envelopes since these should be easily interchangeable for use with any titles.

The question of the advisability of allowing microforms to circulate was discussed at great length by the Committee. Data

gathered from other institutions in regard to circulation indicate in general that these institutions do not allow microforms to circulate. The majority of the Committee feel that no microforms should be allowed to circulate because of their fragile nature and the possible problems involved in replacing them. It is also to be noted that, at this time, there is no method for securing microforms in the same manner as bound materials. The minority opinion of the Committee favored that circulation procedures which now apply to bound materials be extended to include microforms. This is especially important if we are to encourage our users to familiarize themselves with microforms and the ease of their use. In addition, the availability of portable microfiche and microfilm readers indicates that we cannot expect our users to be confined to in-building use of these formats. Because of the divisiveness of the Committee on this point, we recommend that this matter be settled in an open forum of those persons who have a definite interest in the matter.

The active encouragement of use of the microforms collections demands certain needs which should be carefully considered. In the area of personnel, an immediate need is for a technician on an on-call basis who can provide continuous service to all equipment owned by the libraries. The technician should be available on a permanent basis and at all times. This is a definite need if we expect our users to fully accept any changes which we may be planning in regard to conversion from hard copy to microform. At the present time, a definite portion of a clerical's time should be assigned to maintain the microform collections. With future expansion of the collections

and, as needs demand, the hiring of clericals whose primary duty is maintaining the collections at each library will be necessary.

Equipment needs include at this time additional basic readers for microfiche and microfilm. This need is especially acute at Mellon Institute where there are no facilities at present for using microforms. If the policy of non-circulation of microforms is implemented, it will be necessary to provide a fiche-to-fiche duplicator since the user should not be expected to afford to pay for the hard copy of a document available on microfiche.

The present method of storing microforms is not adequate. There is a definite need for cabinets specifically designed for storing microforms. This would mean a more efficient use of space and would also preserve the microforms by protecting them from dust. Since the proper and most efficient utilization of space is a critical problem in all of the libraries of the system, plans should be implemented now for the appropriate storage of microforms.

It is the opinion of the Committee that the libraries should seriously consider expanding their holdings in microforms. And, most importantly, the library staff should always present a positive attitude toward microforms since any trace of opposition on the part of the staff will be sensed by the user and thus discourage our necessary efforts to provide additional useful and important material for study and research.

Aside from the primary charge to the Committee to recommend methods for handling the microform collections of the libraries, it was suggested that the Committee investigate the advisability of

purchasing the National Union Catalog on microfiche. The Committee contacted libraries in the immediate area and elsewhere in order to determine whether these libraries subscribed to the National Union Catalog on microfiche or whether they had considered it for purchase. In general the libraries which are a part of the OCLC system do not have the National Union Catalog on microfiche. The librarian at Case-Western indicated that the hard copy of the NUC there is easily accessible for the public as well as catalogers and bibliographers. He said further that the three OCLC terminals which are available for public use adequately satisfy requests for bibliographic information. At Rensselaer, one hard copy of the NUC is accessible for the public and one OCLC terminal is available at the reference desk for public use. At Ohio State, the public have free access to the technical processing area where they can use the hard copy of NUC; in addition, one OCLC terminal is available to the public. The University of Maryland has a current subscription to the NUC on microfiche as well as two sets of the hard copy. They provide two readers and one reader-printer for its use; Maryland is not part of the OCLC system. At the University of Massachusetts, their NUC on microfiche is used in the acquisitions department and the public has access to two hard copies of the NUC. Massachusetts is not part of the OCLC system but they do receive the MARC tapes. The Committee does not believe that it is within its responsibility to make a recommendation in regard to this matter; we have presented some information here which may be helpful in making a decision on the

matter.

In regard to this report as a whole, the Committee has available data used in making its recommendations and these data can be examined at any time by anyone who is interested.

APPENDIX F

PRESIDENT CYERT'S STATEMENT ON GOALS AND PRIORITIES

(September 20, 1973)

We have gone through a period of planning in which each college and department developed strategies for progress. As I indicated at the beginning of this process, we need to specify our academic goals for the purpose of focussing of our actions and as a guide to the allocation of resources within the University. No organization can function effectively without agreement on the goals it wishes to achieve. This document is a draft subject to revisions as explained below, that attempts to fulfill this need for the next year or two.

Carnegie-Mellon University is and should remain a relatively small university of high quality.. This makes for flexibility and interaction and therefore for continuing relevance as well as excellence in a constantly changing world. And our combination of colleges gives us a unique blend of various faculty talents that have been and should continue to interact with each other on cross-college and interdisciplinary programs that we are especially qualified to develop.

It is clear from the history of this university and from the discussions we have had during the planning period that we must remain steadfastly devoted to the goal of professional education in a variety of fields. The concept of professional education has become a recognized characteristic of this institution, and is a unifying force for the diverse academic activities in existence on the campus.

This education will be at both the undergraduate and graduate levels and within the constraints of CMU remaining a private university. I have given the arguments in my inaugural address for this position. Further, the university will remain committed to maintaining a student body that represents a cross-section of our society with respect to income, racial characteristics, and sex.

We must renew our resolve to make the education at all levels the very best that we as professionals in our areas can provide. In particular it is vital for the survival of this university that the undergraduate education at CMU be

excellent. The education that we give undergraduates must be of the quality that justifies the tuition gap between ourselves and public institutions. We are dependent on our tuition for one-half of our E&GO budget, and the bulk of this tuition comes from undergraduates. We must be the kind of university that uses our best people to teach undergraduates as well as graduates. Without an adequate undergraduate student body this university would become an entirely different organization. I would like to see us enhance our already good reputation as a fine undergraduate teaching institution and at the same time improve further our reputation as a great research university.

APPENDIX F

GOALS AND OBJECTIVES

UNIVERSITY LIBRARIES

CARNEGIE-MELLON UNIVERSITY

August 1977

"University Libraries" includes the Hunt, Engineering and Science, and the Mellon Institute Libraries and the Department of Audio-Visual Services. Our overall goals are:

To provide access to recorded information.

To provide materials and services that support and enhance the instructional and research programs of the University.

The Libraries strive to fulfill these goals through a broad range of specific objectives.

OBJECTIVES

1. Identify and acquire (or otherwise make available) library materials in all formats needed for instruction and research within the university.

2. House and organize library collections and service activities in space that meets staff and user requirements, assures collection security, safeguards the condition of resources and enhances operating performance.

3. Develop reference, bibliographic and other specialized library services that effectively and imaginatively reinforce academic objectives.

4. Develop better ways to offer library resources and to provide additional services for users as a means for improving the quality of academic programs and the effectiveness of research activity.

5. Assist users in the processes of identifying and locating recorded information, understanding organization of library resources and utilizing library services.

6. Maintain purposeful working relationships with academic departments and with other offices of the University to help assure development of library capabilities that are consistent with academic objectives and University plans.

7. Provide opportunities for individual staff member to improve and upgrade their skills in order to maintain a continuing level of excellence in library operation.

8. Promote and create relationships with individuals, foundations, government agencies, other libraries and related organizations to develop additional sources of funding in order to obtain resources or access to resources beyond the normal scope of collection development.

RESOURCES

Personnel:

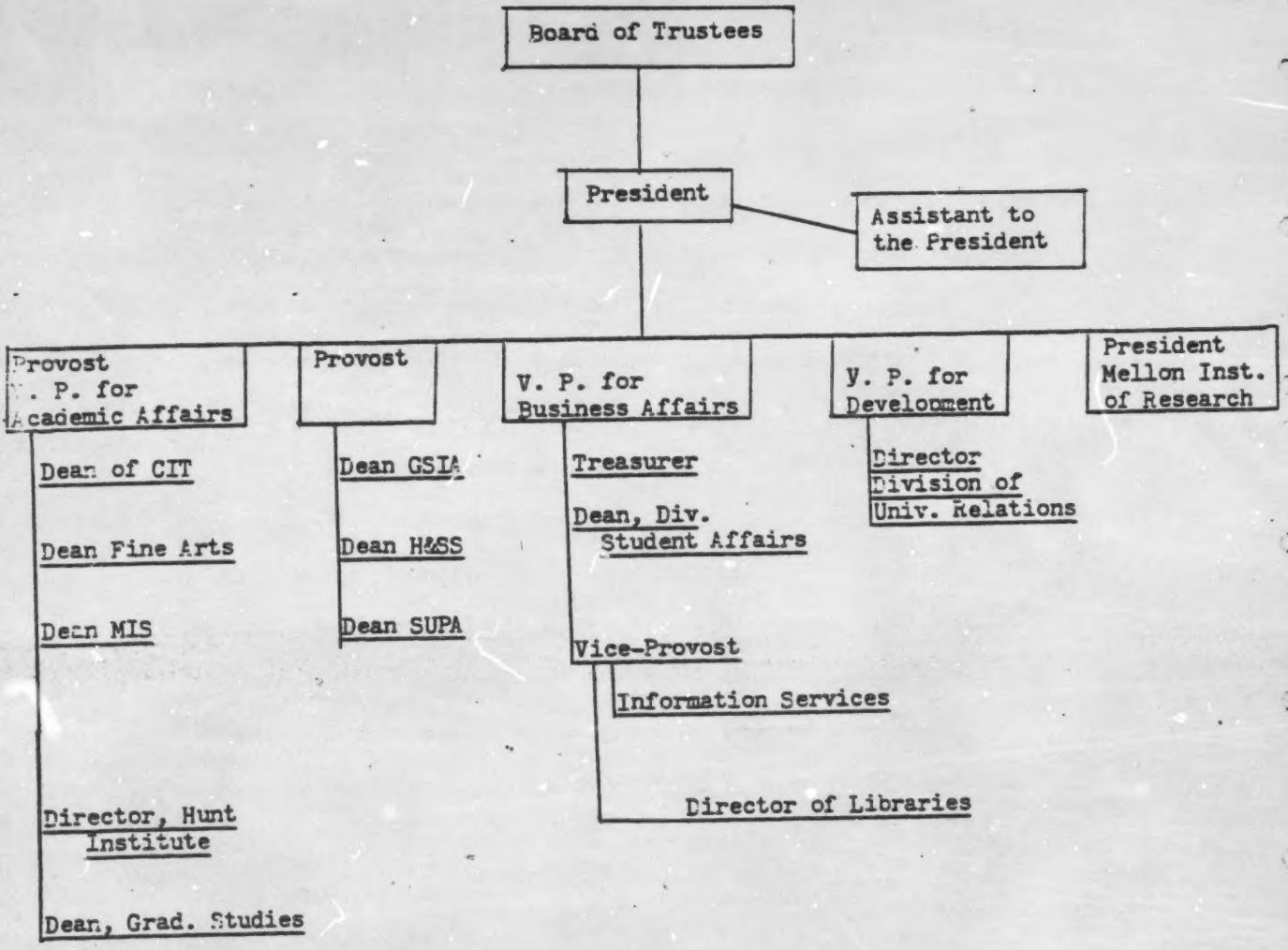
To carry out objectives 4 and 5 we would like to add one professional librarian with a strong background in library instruction, the utilization of audio-visual materials and techniques. Anticipating an increase in the number of interlibrary loans and in the amount of record-keeping in the photocopying area associated with the new copyright law, we foresee the need for 1-2 additional support staff.

Budget

If the current price trends in the cost of materials continues we will have to reduce substantially the amount of material we acquire. In addition the cost, if not the availability, of interlibrary loans and photocopies in lieu of borrowing is likely to increase. We will be hard put to it to maintain current levels of service within the proposed budget guidelines. Counterbalancing this, as funds dry up, the amount of material published may decrease or alternative forms of publishing may develop.

Space

Space is an acute problem for the University Libraries. The focus of the problem is the Engineering and Science Library. Within the next two years the current storage capacity will be exhausted. Several solutions are under consideration, additional remote storage, remodelling the adjacent corridor to provide more space, and conversion of some or most of the journals to microform. We anticipate that some combination of these alternatives will be adopted. Future long-range plans include the establishment of a central storage facility for the Pittsburgh academic libraries. We have recently begun preliminary discussions with the Hillman Foundation about this project.

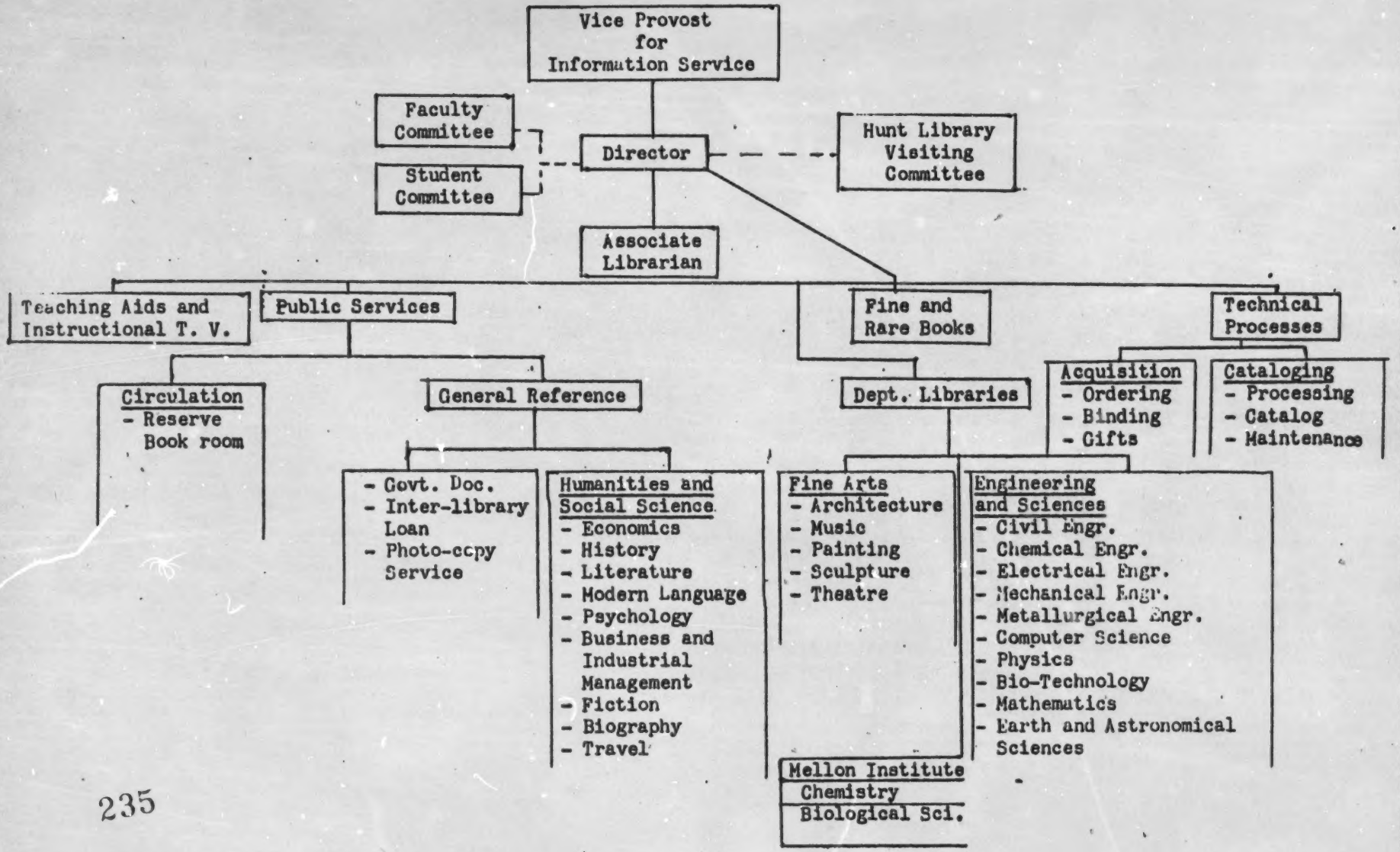


June 1, 1976

Carnegie-Mellon Univ.
Pittsburgh, Pa.

University Libraries
CARNEGIE-MELLON UNIVERSITY

APPENDIX H



HUMAN RESOURCES SURVEY

The Task Force on Human Resources is conducting a survey to aid our study of the Library. We would appreciate it if you would take a few minutes to complete the questionnaire. The results will be analyzed both for interviews, which we will be doing in the next few weeks, and for our report. We will also interview some of you on the topics covered by the questionnaire. It is imperative that you respond since we have such a small base group, and the absence of a single response can significantly affect the results.

Directions for answering: Two approaches are being used to evaluate this questionnaire — quantitative and qualitative. We would like you to go through the questionnaire and answer the multiple-choice questions giving your first impression. Please circle only one answer for each question. Because of the limitations of questionnaires such as this, respondents often feel as though they are being pigeon-holed or that answers do not fully express their feelings on a complex issue. Accordingly, we would like you to go back through the questionnaire and make comments on any or all questions. You might check those you wish to respond to more fully your first time through. If space between questions is inadequate for your comments, please write on back side and number comment to correspond with question number.

This data will be kept in strict confidence and used to compile aggregate statistics. Only the members of the Task Force will have access to the original data, and you will not need to sign your name.

Please supply the information below to aid our analysis:

1. Please check: _____Support Staff _____Library Faculty

2. Check your unit: _____READER'S SERVICES INCLUDING FINE ARTS AND MUSIC

_____SCIENCE LIBRARIES (E&S and MELLON)

_____TECHNICAL PROCESSES

_____OTHER

3. How long have you worked in this Library

_____ Under 5 years

_____ 5 years or more

PLEASE DEPOSIT IN BOX IN SALLY ROSENMEYER'S OFFICE NO LATER THAN JANUARY 18, 1978.

CMU LIBRARIES

HUMAN RESOURCES MANAGEMENT QUESTIONNAIRE

1. How would you rate the involvement of the Library staff in the selection, training and promotion of personnel?

SELECTION: 1. Fully involved 2. Usually involved 3. Occasionally involved 4. Never

TRAINING: 1. Fully involved 2. Usually involved 3. Occasionally involved 4. Never

PROMOTION: 1. Fully involved 2. Usually involved 3. Occasionally involved 4. Never

2. To what extent do you feel a need for more opportunities to encourage the staff in pursuit of learning for advancement in their field or to develop their skills?

1. Great need 2. Some need 3. Very little 4. No need

3. To what extent would you take advantage of such educational and skill development opportunities?

1. Full involvement 2. Fairly involved 3. Very seldom 4. Not at all

4. Have you been given the kind of training required to perform in accordance with your responsibilities?

1. To a great extent 2. A substantial amount 3. Some 4. Virtually none

5. How much are your skills and training used?

1. A great deal 2. A substantial amount 3. Some 4. Virtually none

6. To what extent do you feel there should be a redistribution of duties in the Library in order to improve efficiency?

1. To a great extent 2. To some extent 3. To a slight degree 4. Virtually none

7. Do you think you get the information you need to do your job?

1. Regularly 2. Fairly often 3. Sometimes 4. Seldom

8. How would you characterize the information you get from other Departments in the Library?

1. Superior 2. Average 3. Inadequate 4. Missing

9. Do you think the Library is aware of the operating problems you face?

1. Very 2. Quite 3. Somewhat 4. Not at all

10. How would you rate the supervision of your work?

1. Very effective 2. Quite effective 3. Somewhat effective 4. Not very effective

11. In your estimation are the personnel policies of the Library uniformly enforced throughout the organization?

1. Regularly 2. Fairly often 3. Sometimes 4. Seldom

12. Do you feel free to talk to your supervisor or Department Head about your job?

1. Very free 2. Quite free 3. Somewhat free 4. Not very free

13. Do you feel that the rules and regulations under which you work are:

1. Ideal 2. Fair and just 3. Uncomfortable 4. Too confining

14. How often does your supervisor seek your ideas and use them constructively?

1. Regularly 2. Fairly often 3. Seldom 4. Never

15. Does your supervisor give you credit for your ideas?

1. Always 2. Usually 3. Seldom 4. Never

16. How do you regard the line between professional and supportive staff?

1. Ideal
2. Comfortable
3. Somewhat stiff
4. Too rigid

17. Who makes the major policy decisions in your Department?

1. Everyone has some input
2. Most people have some input
3. A few select people without input from others
4. Only top management makes major policies

18. Who makes the major policy decisions in the Library?

1. Everyone has some input
2. Most people have some input
3. A few select people without input from others
4. Only top management makes major policies
5. Do not know/question does not apply

19. Are you involved in important decisions made in the Library which are related to your work?

1. Fully involved 2. Usually 3. Occasionally consulted 4. Almost never

20. Would you welcome more opportunity for input into Library decisions?

1. Often 2. Whenever my Department is involved 3. Occasionally

4. Just let me do my work

21. Is the Merit Rating Form used for evaluating staff performance adequate?

1. Excellent 2. Good 3. Mediocre 4. Poor

22. Do you consider the resources and equipment available to you adequate to perform your job functions?

1. Always 2. Fairly often 3. Occasionally 4. Not at all

23. Do you feel that part-time employees receive just benefits for their contributions to the Library? _

1. Always 2. Fairly often 3. Occasionally 4. Never

24. Would you like to see brain-storming sessions involving the full staff?

1. Frequently 2. Occasionally 3. Seldom 4. Never

25. Do you feel the opportunity should be available to you to work up proposals leading to applications for Grant funds?

1. Always 2. Usually 3. Sometimes 4. Never

5. Question does not apply

26. Do you feel that you should have more input concerning acquisition of monographs, serials, records, etc. for your collection?

1. Always 2. Usually 3. Sometimes 4. Never

5. Question does not apply

27. Do you feel that there is a need for informative discussion programs to clarify such issues as benefits, insurance, etc.?

1. Frequently 2. As need arises 3. Seldom 4. Never

APPENDIX K.

RS - Reader's Services including Fine Arts and Music
SL - Science Libraries
TP - Technical Processes
O - Other
UNC- Unclassified Response

		ENTIRE STAFF										PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years										
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc	<5	>5	<5	>5	<5	>5
1. How would you rate the involvement of the Library staff in the:																	
a. Selection of personnel?	Fully involved			1						1			1	1			
	Usually involved	1		1	1		1	1		1	1	1	2	2	2		
	Occasionally	3	2	1	2		3	2	3	1	3	2	5	6	5		2
	Never	3	4	1			4	3	1	1	1	4		4	10		
	No response	2			2		1		1	1	1			3	3	1	1
b. Training of personnel?	Fully involved	1			1		2	2	1	2	1		3	1	5	1	
	Usually involved	1	4	2	1		3	4	3	1		2	5	6	5		1
	Occasionally	4	2	1			3			1	4	4	1	3	7		
	Never	1		1										2			
	No response	2			3		1		1	1	1			4	3	1	1
c. Promotion of personnel?	Fully involved									1			1				
	Usually involved			1	1									2			
	Occasionally	3		1			3	2	2	2	2	1	5	3	5		1
	Never	3	6	2	1		5	3	2	2	3	6	2	6	13		
	No response	3			3		1		1		2		1	5	2	1	1
2. To what extent do you feel a need for more opportunities to encourage the staff in pursuit of learning for advancement in their field or to develop their skills?	Great need	2	2	2	2	1	3	4	2	4	3	3	4	6	12		
	Some need	4	3	2	3		4	2	1		3	3	4	7	6	2	
	Very little	1					1		1	1		1	1		2		
	No need						1		1						2		
	No response	2												2			
3. To what extent would you take advantage of such educational and skill development opportunities?	Full involvement	4	2	2	4	1	1	3	1	2	1	4	3	8	5	1	
	Fairly involved	3	4	2			4	2	2	2	5	3	4	6	10		1
	Very seldom	1			1			1	1	1			1	1	2	1	
	Not at all						4		1				1		4		
	No response																

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		ENTIRE STAFF										PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years										
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc	<5	>5	<5	>5	<5	>5
4. Have you been given the kind of training required to perform in accordance with your responsibilities	to a great extent	3	3	1			1	2	2	2		1	1	6	6		
	substantial amt.	2	2	2			7	3	3	1	1	2	7	4	8		
	some	4	1	1	2		2			1	3	4		4	6		
	virtually none				2			1		1			1	1	1	1	
	no response				1						1			1			
5. How much are your skills and training used?	to a great extent	3	4	1	2		3	3	3	2	2	4	5	6	7		1
	to some extent	4	1	2	1		4	3	2	2	4		4	7	11	1	
	to slight degree	1	1	1	2	1	1		1	1		3		3	3		
	virtually none																
6. To what extent do you feel there should be redistribution of duties in the Library in order to improve efficiency?	to a great extent	2		1				2	1	1	3	1	2	2	5		
	to some extent	3	4	3	3		5	3	2	3	1	5	4	7	10	1	
	to slight degree	1	2				1		2	1	1	1	3	2	2		
	virtually none						1	1							2		
	no response	3			2		3				1			5	2		1
7. Do you think you get the information you need to do your job?	regularly	3	4	1	2		2	4	2	3	3	3	2	6	12	1	
	fairly often	4	2	2	1		6	1	3	2		3	6	6	6		
	sometimes	2		1		1	1	1			3	1		2	3	1	2
	seldom				1									1			
	no response																
8. How would you characterize the information you get from other Departments in the Library?	superior							1							1		
	average	5	3	2	1		6	1	4	6	1	3	5	7	13	1	
	inadequate	3	3	1		1	3	3	1		3	3	4	4	5	1	1
	missing			1	2						1	1		2	1		
	no response	1			1			1						2	1		
9. Do you think the Library is aware of the operating problems you face?	very						3	1					1		3		
	quite	1	3	2	1		2	4	3	1	3	2	3	4	10	1	1
	somewhat	5	3	2		1	3	1	2	3	2	4	5	6	5	1	
	not at all	2			3		1			1	1	1		4	3		
	no response	1												1			

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		ENTIRE STAFF										PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years										
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc	<5	>5	<5	>5	<5	>5
10. How would you rate the supervision of your work?	very effective	2	1	1	4		2	3	1	1		2	1	2	6	1	
	quite effective	3	3	1	2		5	1	3	2	3	1	3	8	11		
	somewhat effective	2	1	2	1		1	2			2	4	3	2	2		
	not very effective	1			1		1			1				1	2		
	no response	1	1		11	1		1		1			2	3			1
11. In your estimation are the personnel policies of the Library uniformly enforced throughout the organization?	regularly		1	1			1		1				1	2	1		
	fairly often		3	1	2		3	4	2	3	1	3	4	2	9	1	
	sometimes	4	1		2		3		2		5	3	3	4	6		1
	seldom	2	1	1			2	2		2		1	1	3	5		
	no response	3		1	1									5			
12. Do you feel free to talk to your supervisor or Department Head about your job?	very free	3	1	4	1		4	5	5	4	3	2	7	6	14	1	
	quite free	3	5		3		4	1				3	1	8	4		
	somewhat free	2			1					1	2	1	1	2	2		
	not very free	1					1				1	1			1	1	1
	no response																
13. Do you feel that the rules and regulations under which you work are:	ideal			1	1		1	1	1	1			1	1	3	1	
	fair and just	5	5	3	2		6	5	4	3	4	5	8	10	14		
	uncomfortable	2					2					2			2		
	too confining	1	1							1	1			2	2		
	no response	1			2						1						1
14. How often does your supervisor seek your ideas and use them constructively?	regularly		2				2	2	1	1		1	1	1	4		1
	fairly often	2	2	2	3		4	3	3	2	3	3	5	5	9	1	1
	seldom	4	2	1			2	1	1	2	3	2	3	5	6		
	never	1					1					1			1		
	no response	2		1	2												
15. Does your supervisor give you credit for your ideas?	always	1	3	3	2		3	3	3		2	4	2	4	9	1	
	usually	3	2	1	1		4	2	2	4	4	2	6	5	9		1
	seldom	3								1	1	1		2	2		
	never						1								1		
	no response	2	1		2				1				1	5			

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		ENTIRE STAFF											PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years											
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc		<5	>5	<5	>5	<5	>5
16. How do you regard the line between professional and supportive staff?	ideal			1											1			
	comfortable	4	2	1	1		3	3	3	2	1		2	6	5	5	1	1
	somewhat stiff	3	4	2	1		3	2		3	5		4	1	6	12		
	too rigid	2			1		3	1	2				1	2	2	4		
	no response				2										2			
17. Who makes the major policy decisions in your Department?	everyone	2			2		1	3		1	1		2	2	2	4		
	most people	1	2	3			2	1	2		1		2	3	4	2		1
	few select people		3		1			2			2		2	1	2	3		
	only top mngmt...	5	1	1	2		6		3	4	2		1	3	7	11	1	1
	no response	1												1				
18. Who makes the major policy decsions in the Library?	everyone....																	
	most people....		2				1		2	1	1		1	2	1	2		1
	few select people		3	2	1		2	1			1		1	3	5	1		
	only top mngmt...	5	1	1	3		5	2	3	3	3		5	3	4	13	1	
	do not know...	4		1	1		1	2	1	1					6	5		
	no response							1						1				
19. Are you involved in important decisions made in the Library which are related to your work?	fully involved		1	1				2			1			2	2	1		
	usually		1		2		4	2	2	2	1		2	5	1	5		1
	occsly. consulted	3	2	1			1	1	2	2	2		5	1	1	7		
	almost never	3	2	1	3		4	1	1	1	2			1	8	8	1	
	no response	3		1											4			
20. Would you welcome more opportunity for input into Library decisions?	often	3	3	1			2	2	1	1	1		6	5	1	1		1
	when my dept. is involved	4	2	1	3		4	4	2	3	3		1	3	8	13	1	
	occasionally	1		1	2				1		2				4	3		
	let me do my work		1	1			3			1					2	4		
	no response	1							1					1	1			

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		ENTIRE STAFF										PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years										
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc	<5	>5	<5	>5	<5	>5
21. Is the Merit Rating Form used for evaluating staff performance adequate?	excellent																
	good	4	1	2	1		7	3	3	1		1	2	6	12	1	
	mediocre	1	2	2	2			3	1	1	3	2	4	5	3		1
	poor		1		1		2			2	3	1	1	1	6		
	no response	4	2		1				1	1		3	2	4			
22. Do you consider the resources and equipment available to you adequate to perform your job functions?	always	1	1	1			1		1	2			1	3	3		
	fairly often	3	4	3	1		5	3	4	2	4	4	6	7	11		1
	occasionally	4			2		2	2		1	2	2	1	3	6	1	
	not at all	1	1		2		1	1				1	1	3	1		
	no response																
23. Do you feel the part-time employees receive just benefits for their contributions to the Library?	always																
	fairly often	1	1		1		3	1	3	2	1		3	2	6	1	1
	occasionally	3	3	2	3		3	3	1	1	1	4	5	7	4		
	never	4	2	2			3	1	1	2	4	3	1	4	10	1	
	no response	1			1			1						2	1		
24. Would you like to see brain-storming sessions involving the full staff?	frequently		1		2		1		1		1	2	2		1	1	
	occasionally	7	3	2	1		5	6	3	5	3	3	6	10	16		
	seldom	1	2	2	1		1					2	1	4			
	never				1		2		1		2			1	4		1
	no response																
25. Do you feel the opportunity should be available to you to work up proposals leading to applications for Grant funds	always		1	1	3				1		1	3	1	1		1	1
	usually	1	2		1		1	1	2			3	2		2		
	sometimes	3		1			4	1	1	2		1	5	3	3		
	never				1				1	1	1			1	3		
	does not apply	4	3	2	1		4	2		2	4			10	12		
	no response	1						2					1	1	1		

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		ENTIRE STAFF										PROF. STAFF		SUPPORT STAFF		UNCLASSIFIED	
		0-5 years					5-up years										
		RS	SL	TP	O	UNC	RS	SL	TP	O	Unc	<5	>5	<5	>5	<5	>5
26. Do you feel that you should have more input concerning acquisition of monographs, serials, records, etc. for your collection?	always			1	1			1		1		2	3				
	usually	3	2		1		4		3		1	4	4	1	3	1	
	sometimes	1	1				1	1					1	1	1	1	
	never	1					1		1	1	1			1	4		
	does not apply	4	3	3	3		3	2	1	3	4	1	1	12	12		
	no response								1						1		
27. Do you feel that there is a need for informative discussion programs to clarify such issues as benefits, insurance, etc?	frequently	1	2	2	2			1	2	1	1	3	1	3	4	1	
	as need arises	8	4	2	2		9	4	2	4	5	4	8	12	15		1
	seldom													1	1		
	never				1				1								
	no response							1		1				1			

APPENDIX L

HUMAN RESOURCES TASK FORCE

The Human Resources Task Force has formulated the following questions from the answers to their survey to be discussed in personal interviews. Please be thinking of the areas of concern to you.

1. Have you been involved in selection of personnel for your department? If not, how much involvement would you like to help clarify requirements necessary for the position?
   Have you ever been involved in promotion of personnel in your department? If not, do you feel that you should be involved? Why?

2. What kinds of programs/opportunities could be initiated that would benefit you or your department? Are you fully aware of the opportunities now open to you?

3. How would you redistribute duties or tasks that would improve the efficiency of your department or of the Library as a whole?

4. Do you feel there is a need for better communication between departments - what area - what suggestions could you make?

5. Is the Library aware of the operational problems in your department or for you as an individual? If not, what steps have you taken to inform them; why do you think these problems exist? How could this be remedied?

6. What kind of supervision do you prefer? Why?

7. Let's be honest - what personnel policies have not been enforced systematically and uniformly?

8. How does your supervisor seek your ideas? If your ideas are not used, are you told why?

9. What is the "line" claimed to exist between professional and supportive staff? Can you offer suggestions for change?

10. Have policy decisions affecting you or your department been made without direct input from you? What suggestions could you offer to rectify this?

11. What changes would you suggest to improve the current merit rating form?

12. List benefits that should be available to part-time employees.

13. Should brain-storming sessions include entire staff or be limited to departments? How often?

14. What kind of proposals should individuals work up?

15. Do you feel that you should have more input concerning acquisition of monographs, serials, records, etc., for the collection? Elaborate!

16. Department heads and supervisors will also be asked to discuss their jobs.

TECHNOLOGY AND FACILITIES

INTERVIEWS

The Task Force interviewed, both formally and informally, library staff members and computer resource persons to solicit their views on the areas under study.

These questions were used as guidelines for the interviewers:

> What do you consider is the main area of potential automated development in the sphere of technical processes? Given the present state of OCLC serials check-in do you prefer that the library investigate a minicomputer serials check-in system of its own?
>
> What research has been done by the library, or by you, into specific areas of automation?
>
> Can we have your views on the current position of cooperation with other institutions and what do you forsee for the future?
>
> What do you feel about hiring a team of catalogers to modify the shelflist to make it compatible with MARC format?
>
> How do you react to the proposal that the collection be reclassified according to LC?
>
> Implementing changes inevitably causes upheavals in staffing, and automation would more than likely cause a rearrangement of duties and personnel. Are there any particular problems that you feel may occur?
>
> Given our current position on automation in the library do you see the need for additional OCLC terminals?
>
> Do you have any comments on the introduction of microforms?

In the interviews with the computer resource persons, both at CMU and at the Graduate School of Library and Information Sciences, University of Pittsburgh, a different approach was used. The interests of the Task Force were explained and the persons interviewed were asked to comment at length.

STAFF INTERVIEWS

Staff members in the Technical Processing and Circulation Departments were asked to state their feelings about automation of library systems, to make suggestions and to offer their reservations.

In general those interviewed expressed interest and enthusiasm for the introduction of automated systems. This ready acceptance may be the result of the successful adoption of OCLC. OCLC has eliminated much of the tedious searching previously required for cataloging and acquisitions and it has simplified the whole ILL procedure.

Everyone interviewed saw the use of machine systems as a means of eliminating tedious, repetitive tasks and, more important, reducing error. The potential for developing better records and valuable statistical information was recognized.

Interviews - 2

Criteria for both circulation and serials control systems were suggested:

> There must be immediate and constant access to the data base.
>
> The library must be either a preferred customer of the university's Computation Center, or it must have its own minicomputer.
>
> Acquisitions, shelflist and circulation control should be tied into one system.
>
> There should be a back-up system should a malfunction of the computer occur. Other libraries have lost records because of computer failure.
>
> A circulation system should be able to indicate the status of a book (in, our, reserve, missing), it should generate overdue notices and it should provide information for statistics.

Certain reservations were voiced:

> The library should be guaranteed continued funding for the program until the system is fully developed.
>
> Cooperation with other institutions should be approached with caution, and should be undertaken only when it has been determined that their systems are effective.
>
> An offline system should be avoided as being cumbersome and inefficient.

It was generally agreed by those interviewed that the conversion of journals to microform is the most acceptable solution to the space problem. Three criteria were proposed for a system:

> Good equipment, with a high standard of readability and reproduction.
>
> Good instruction and training programs for both staff and users.
>
> Good maintenance program.

There was no apprehension about staffing problems. Changes would have to be made and some realignment of responsibilities may be necessary.

The conversion to LC classification was seen as unnecessary by the Head of Technical Processing. Since LC intends to close its card catalog and to go online in the near future it would be fair to assume that CMU would eventually have an online catalog itself. Online catalogs and facility to locate information that they bring will reduce the importance of any classification scheme.

It was suggested that library instruction might lie well within the boundaries of an automated system. For example, an emulator of a data base such as Lockheed would be excellent for training users in the technology of the libraries of the future.

COMPUTER RESOURCE PERSONS

The cost of computer hardware and software was discussed, and estimates varied according to the tupe of system selected. A minicomputer for the library could cost from $75,000 to $110,000, depending on its storage capacity and its capability for expansion. It was estimated that software packages would cost as much as $100,000-$150,000. A link-up to the university's Computation Center would cost about $100,000.

None of those interviewed recommended that the library develop its own software. There are many packages available and there is little doubt that satisfactory systems can be obtained at a cost far less than that needed to develop new systems. It is vital that the right choice be made, however, for even the best package will have to be modified to the library's needs, and this can be expensive.

The idea of developing an integrated system based on commercially available packages is viewed as being challenging and innovative. The major difficulties are software compatibility and hardware obsolescence. The great attraction of a Data Base Management System is that the data base and files are independent of the program and therefore have the capacity to accommodate change. This permits the development of more sophisticated approaches as the system grows. Systems designed for specific operations are much more difficult to modify.

The question of the personnel needed was discussed. It was felt that some reallocation of staff would be necessary, but that it was unlikely that any staff reduction would result. Automation usually brings better, faster service for the user and increased efficiency for the staff.

APPENDIX N

COLLECTION GROWTH AND SPACE NEEDS IN THE ENGINEERING & SCIENCE LIBRARY

Ann M. de Klerk
E & S Librarian
May 1977

AIM

The purpose of this report is to summarize the current space situation in the Engineering & Science Library, and to present various alternatives which it may be desirable to consider for the future growith of the collection. The alternatives are presented with pros, cons and costs.

This report refers to periodicals only, as it is assumed that the space assigned to monographs will now remain constant. There is space for 4-5 years' growth, and a continuous weeding program must be initiated in the near future. Present space for journals will suffice for two years only.

INTRODUCTION

Measurement and projection of the growth of individual journals, as well as the growth of the journal and book collection, were essential to planning. Measurement of five years of journals, and statistical sampling covering a period of ten years, undertaken with the guidance of Dr. Gordon Lewis and with the assistance of Ms. Margie Sheehan, has

resulted in the following significant findings. A full report of the method and findings will be published in the near future.

A. The average journal size currently is 3.25".

B. This average size is not likely to grow, since the growth rate is now negative. (This finding is confirmed by an independent study described in BLL Review 4 (2) 1976. [1]

C. Allowance is made below for possible new subscriptions, although it is assumed that the total number of subscriptions will not grow more than 10% because of lack of budget for new periodicals.

ALTERNATIVE A

Purchase as many subscriptions as possible in microfilm on a current basis.

To summarize an update my memo of October 29, 1976, if 50% of all current subscriptions were ordered concurrently on microfilm (total number presently obtainable) and 5 years of hard copy of these journals were retained unbound at the same time, present space would suffice for ten years, until 1987. This would assume the purchase of 36 double-face stacks (lengthwise between the pillars) and the purchase of more reader-printers. It is important to note that this alternative does not allow space for the journals now in Hunt Library basement.

Pros - Large saving of space

Binding costs reduced

Missing issue replacement cost reduced

Lacking a missing issue would not be a problem after a maximum of 1½ years, i.e., when the microfilm is received.

Cons - Higher use in 5-10 year current span, as against more retrospective microfilm

After 5 years many more reader-printers would be needed to enable more readers to gain access to material

Cost of production of hard copy higher than cost of reproducing from printed journal (now the faculty can take journals to their departments to copy).

Cost -		
Kodak Startech Reader-Printer	$ 5000	ea.
Additional reader	1000	
36 double-face stacks at current prices (5.5% increase over 1976) without labor	5388	
	$11,388	

To this minimum cost must be added the cost of the current microfilm subscriptions, which in the case of scientific journals far exceeds the cost of binding.

Annual cost for partial list of titles on microfilm

University Microfilms	192 titles	$1,734.37
Pergamon Press	42 titles	1,895.00
Societies (except SIAM)	75 titles	3,218.00
Princeton	49 titles	2,188.00
		$9,035.37

Annual binding cost of 2/3 bound volumes NOT including abstracts at $3.95 per vol. $3,452.30

ALTERNATIVE B

It has been suggested that as we already have bought the material and bound it, we would not wish to purchase it again in microform. The cost of retrospective titles available now would be a minimum of $175,000. However, there are several advantages to converting retrospectively.

1. Lower use would decrease frequency of user objections. Chen's study of journal usage frequency shows that the highest percentage of use occurs during the 2nd and 3rd years following publication. Use of journals 18 years old or more represents 6% of the total journal collection use.[2]

2. Fewer reader-printers would be needed in the long run.

Space savings could be as great as current if all but the most recent 15 years could eventually held in microfilm only.

ALTERNATIVE C

If our goal were to retain hard copy of journals for as long as possible, then additional stack space must be provided. We cannot place stacks in the current reading area, as our student/seating ratio is already far below the ALA standards of 1:4. In E & S the ratio is 1:14, counting only students enrolled in CIT and MIS. Ideally, we should also seek to reintegrate into the collection the E & S journals now housed in the basement of Hunt Library. Hunt Library is also suffering from space problems.

If it does become possible to annex the corridor adjacent to the library, this space could be used as a semi-storage but open-stack area for pre-1950 journals. The following possibilities could be considered.

Structural alterations envisaged for such a storage area would include blocking off both ends of the corridor, cutting two doors from the library to the corridor, i.e., through the Reserve Book Room and through the Group Study Room or the end of the Current Periodical Stacks.

Space yielded: Far side of corridor - 62 yards

Near side--3 yds. allowed for doors 59 yards

I. If the journals were shelved in two single stacks, an equivalent of 5 years at the current growth rate could be accomodated.

II. If one double and one single face stack were used, 10 years growth would be available.

III. If two double-faced stacks were used, one against each wall, and the journals filed double, 20 years growth would be made possible, or 10 years growth + all Hunt Library basement journals.

Pros - In 10 years, equipment may be much more sophisticated and easier to use. There will undoubtedly be computer-related developments.

Cons - A quick tour of Hunt Library basement reveals the deterioration of many of the older journals.

Cost - For stacks (not including labor) CI - $11,244

CII - $14,474

CIII - $17,500

ALTERNATIVE D

If our goal is to provide more study rooms and journal space, combinations of any of the above could be adopted.

CONCLUSION

It is clear that sooner or later, some journals will be in the library in microform only. User resistance will be encountered initially whenever this is done. The key seems to me to be first-rate adequate equipment, coupled with excellent assistance from the library staff.

References

[1]Wooton, C. B. "Growth of the Literature and its Implications for Library Storage." BLL Review, Volume 4, 1976, p. 41-46.

[2]Chen, Ching-Chih. "The Use Patterns of Physics Journals in a Large Academic Research Library." American Society for Information Science Journal, Vol. 23, 1972, p. 254-265.

APPENDIX O

"ON LINE RESOURCE SHARING - A COMPARISON OF OCLC and BALLOTS"

OCLC Uses short set of characters	BALLOTS Uses "keyword" technique
Services 1200 libraries	Services over 100 libraries
Indexes - 8 search keys author/title LC card # CODEN author ISBN title ISSN OCLC Control #	Name indexes word & phrase index Full name need not be known Title word index may be used in garbled or key phrases (Including several key words from anywhere in title) search made Phrase index for subjects
Claiming & binding of serials not yet operational Checkins - used by 150 libraries while OCLC evaluates the system	
Printer attachment Production of Book pocket, card and spine labels accession lists - available No-standing search request notices	Book cards, etc... not available No accession lists Has standing search request notices
Future Developments: Serial cards Interlibrary loan Acquisitions Subject Retrieval Serials control - claiming & binding Authority control Circulation control Monographic local holdings	